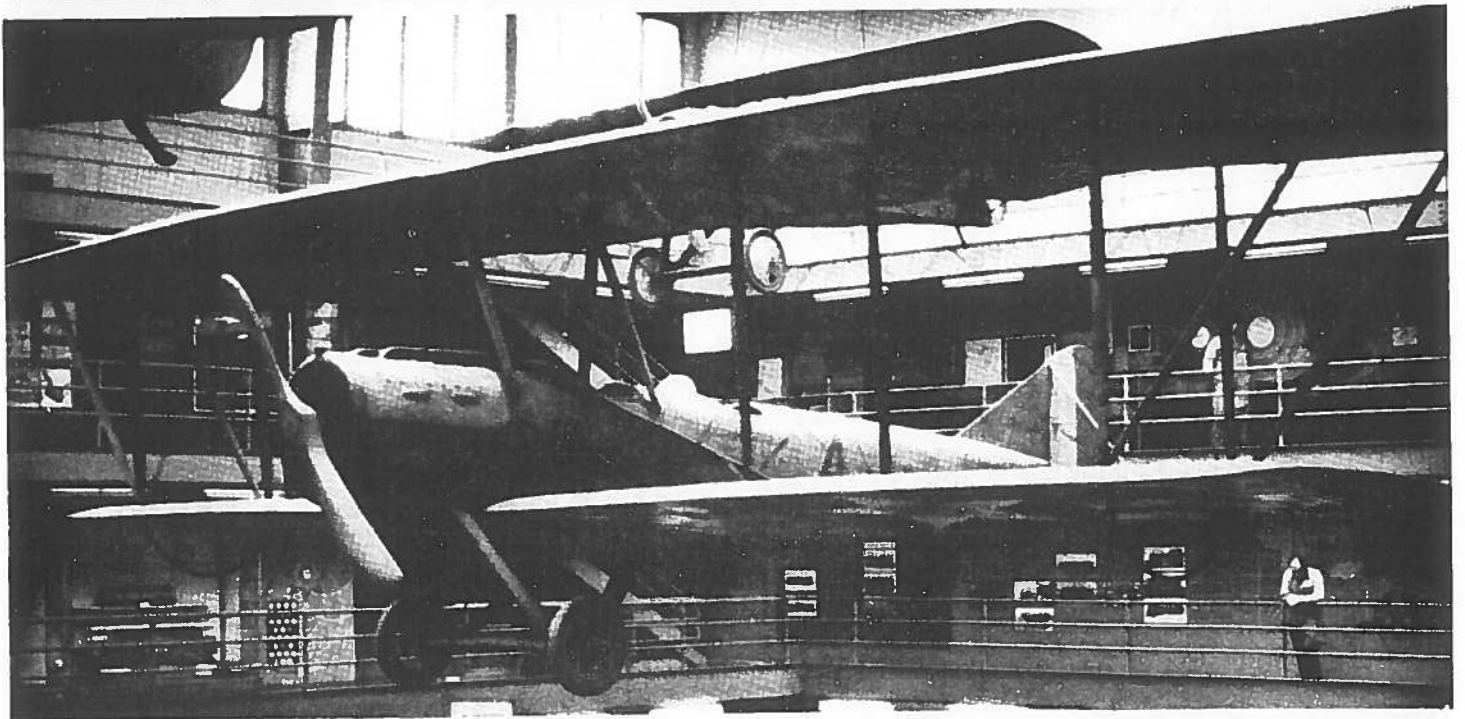
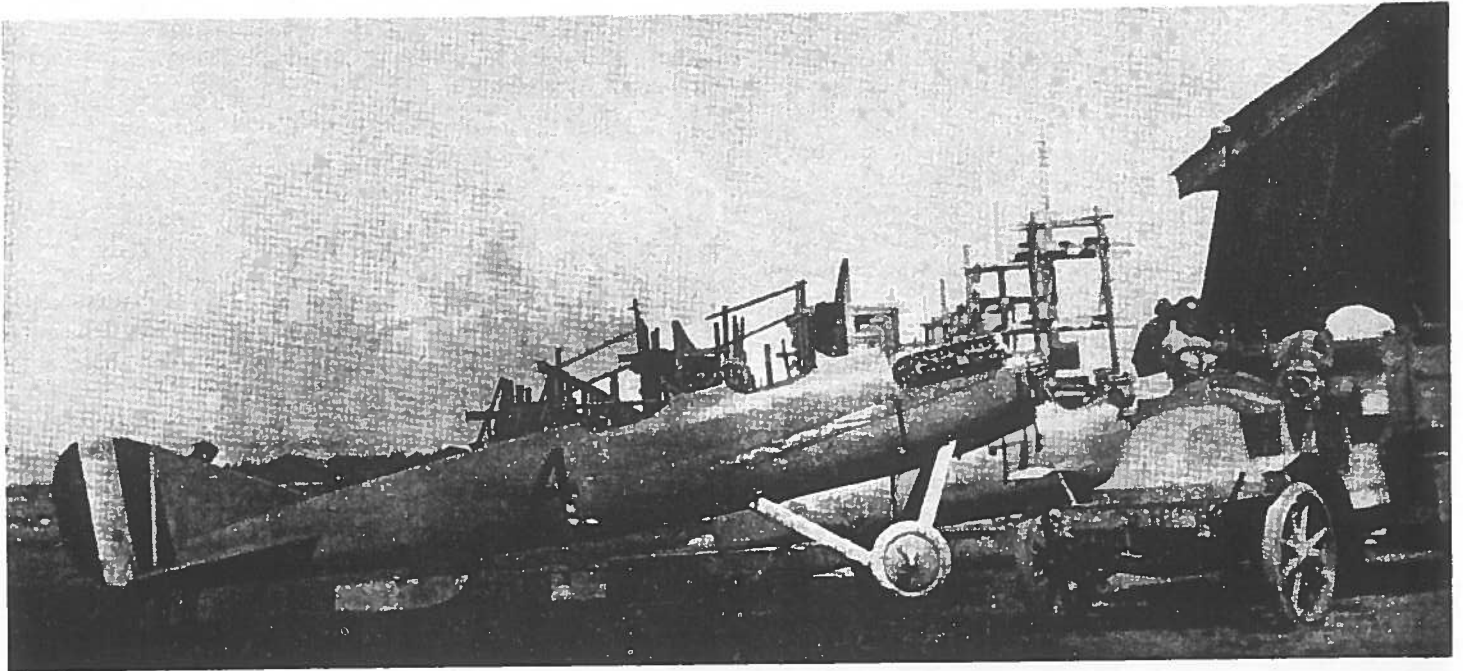


# small air forces observer

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July 1978

# small air forces observer

the newsletter of the Small Air Forces Clearing House

**COVER COMMENTS:** Featured on this month's cover are two photos of the same aircraft taken half a century and a full continent apart. The aircraft is an American-built LWF Model V training biplane that was sold to Czechoslovakia shortly after WW I. The top photo depicts this aircraft during assembly by the 1st Air Detachment of the Czechoslovak Legions somewhere in Siberia during 1919. The bottom photo shows this same aircraft as it is currently displayed in the National Technical Museum, Prague, Czechoslovakia. The complete story of how this WW I American aircraft found itself in Siberia and how it got to Prague is told in this issue by SAFCH member Vlastimil Schildberger who also supplied our cover photos.

**TAILPIECE:** Continuing our coverage of the LWF Model V, our back cover features construction details of this aircraft drawn specially for the SAFCH by Colin Owers. A technical description and 1/72-scale drawing of the LWF Model V, also by Colin, are found elsewhere in this issue.

**FINANCIAL STATEMENT:** With 237 members receiving issue #9, income was \$237.00. Printing #9 cost \$159.59 and mailing cost  $237 \times \$0.34 = \$80.58$  for an outgo of \$240.17. This leaves a deficit of -\$3.17. There are 124 back issues of issue #9 left which if sold can provide a substantial surplus to be applied to the remaining issues of Vol. 3.

**BACK ISSUES:** Vol. 1 is available only as Xerox copies. Because of a recent increase in copying costs, a copy of the 130 pages of Vol. 1 now costs \$6.00. Back issues of Vol. 2 are available at \$4.00 for the set of 4 issues (120 pages). All prices include postage.

**SAFO EDITORIAL POLICY:** The purpose of the SAFCH is to "promote interest in the history and modeling of the aircraft of the smaller countries of the world". In support of this goal, the SAFO will publish articles on all aspects of aviation (both military and civil) from all periods of time and for all of the smaller countries. To insure that the SAFCH remains a "member oriented" organization, the following guidelines have been adopted: (1) All manuscripts submitted by members will be published in the next available issue of the SAFO. (2) An issue will be published as soon as sufficient manuscripts are on hand to exhaust the money available for that issue. (3) Subscription money will be used only to print and mail the SAFO. There will be no "miscellaneous" column in our budget. And, (4) members are encouraged to sponsor SAFCH memberships for individuals, organizations, and libraries (especially those in countries where US funds are difficult to obtain).

**MEMBERSHIP LISTS:** To provide more space for articles in the SAFO, a SAFCH membership list will be published only in the last issue of every volume. However, a complete, up-to-date list can be obtained at any time by sending \$1.00 to the editorial office. This cost includes surface postage. If you desire air mail delivery, add \$1.

**SUBSCRIPTION RATE:** Subscription to the SAFO is US \$ 4.00 for 4 issues. Send remittance to J. V. Sanders, 27965 Berwick Dr., Carmel, CA 93923, USA.

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**EDITORIAL:** The response of the members for help in eliminating the Vol. 2 deficit has been fantastic. Donations totaling \$201.34 have been received from 83 members. (Thirty members contributed \$1, 31 contributed \$2, 4 \$3, 5 \$4, 5 \$5, 6 \$6, 1 \$9, and one group contributed \$12.) In addition, \$95.00 has been realized from the sale of 106 back issues. This results in a total additional income for Vol. 2 of \$296.34. Since the deficit for Vol. 2 was -\$173.36, we now have a surplus of +\$122.98. Adding to this surplus will be the income from the sale of the 115 back issues remaining from Vol. 2. I want to thank all of you for your generous support of the SAFCH. This surplus will be returned to you in the form of an enlarged Vol. 3. Whether this enlargement will take the form of more pages per issue or an extra issue will depend on the magnitude of the final surplus.

## DECALS FROM MEXICO

Our good friend, Mardonio Islas, has sent a list detailing his plans for further decal sheets for Mexican aircraft. This list is not only exciting because of the subjects planned for 1/72 scale, but also because of the announcement that decals for 1/48 scale are to be produced. Here is Mardonio's list:

- 72-1 P-47 Thunderbolt for the MEAF
- 72-2 P-47 MAF (olive green)
- 72-3 P-47 MAF (grey with yellow stripes)
- 72-4 Lockheed T-33A
- 72-5 Douglas A-24 Dauntless
- 72-6 Douglas C-47
- 72-7 Kingfisher, Mexican Navy (wheels)
- 72-8 Kingfisher, Mexican Navy (floats)
- 72-9 Kingfisher, MAF (2 versions)
- 72-10 Vampire, MAF 1, 2, etc.)
- 72-11 Vampire (green with mouth)
- 72-12 Vampire (silver with mouth)
- 72-13 North American AT-6 (silver)
- 72-14 North American AT-6, MAF (olive green)
- 72-15 North American AT-6, Air College - 2 periods
- 72-16 Bell 205
- 72-17 North American B-25 Mitchell
- 72-18 T-34 Mentor, MAF
- 72-19 Albatross, Mexican Navy
- 72-20 PBV-5 Catalina, Mexican Navy
- 72-21 Northrop F-5E (if purchased by MAF)

- 48-1 P-47 Thunderbolt for the MEAF
- 48-2 P-47 MAF (silver with blue stripes & gray with yellow stripes)
- 48-3 P-47 MAF (silver with green stripes, gray with dull red stripes, & olive green with yellow)
- 48-4 Douglas A-24 Dauntless (3 versions)
- 48-5 Kingfisher, Mexican Navy (wheels)
- 48-6 Kingfisher, Mexican Navy (floats)
- 48-7 Kingfisher, MAF (2 versions)
- 48-8 North American AT-6 (silver)
- 48-9 North American AT-6 (olive drab/neutral gray & olive green)
- 48-10 North American AT-6, Air College - 2 periods
- 48-11 Lockheed T-33 - 2 periods
- 48-12 Boeing Stearman - 2 periods
- 48-13 Bell 205
- 48-14 North American T-28A - several versions
- 48-15 North American T-28A - several versions
- 48-16 Ryan Trainer
- 48-17 Douglas C-47
- 48-18 Northrop F-5E (if purchased by MAF)

Mardonio promises to produce decals for all new kits of a/c used by the Mexican armed forces. Also, if there is enough interest, he will produce decals for the Mexican P-47 and Dauntless in 1/32 scale.

All new decal sheets will be announced in the SAFO as

Continued on page 63

## SAFCH RESEARCH PROJECTS

Below is a list of all active SAFCH Research Projects along with the names and addresses of the project directors. Also included is the number of the issue in which the most recent progress report appeared. All members with information on or interest in any of these topics should contact the project director. Any member wishing to initiate a SAFCH Research Project should submit to the editor a description of the project and an initial Progress Report. To remain "active" a Research Project must have published at least one Progress Report in one of the previous 8 issues of the SAFO.

RP#2 Aircraft of the Estonian Air Force (SAFO #2) - Ted Koppel, 133 W. Lanvale St., Baltimore, MD 21217.  
 RP#3 Latin American Fighter Aircraft (SAFO #10) - Nick Waters, NARDET TWIN CITIES, E. 62nd St. & 31st Ave. S., Minneapolis, MN 55450.  
 RP#5 Small Air Force's Hercules (SAFO #3) - Marc & Dick Gronet, 5496 Sleeping Dog Lane, Columbia, NY 21045.  
 RP#6 The Cierva C.30 with the Small Air Forces (SAFO #7) Jim Sanders, 27965 Berwick Dr., Carmel, CA 93923.  
 RP#7 Westland Helicopters, Etc. (SAFO #10) - Wyn Edwards, Denecot, Toodsmoor, Brimscombe, Stroud, England GL5 2UL.

## SAFCH SALES SERVICE

The following items are available from the editorial office (27965 Berwick Dr., Carmel, CA 93923). All prices are in US \$ and include surface postage. Make checks or IMO payable to SAFCH.

### 1/72-SCALE DECALS

Polish Air Force - Over 300 national, squadron, and personal insignia on a 33 by 24.5 cm sheet. \$4.00  
South African Air Force - sixty-two "castle" insignia plus inscriptions and comprehensive instructions. \$2.00  
Mexican Air Force -

- 1) MEAF P-47 in the Philippines. \$1.00
- 2) FAM F-47 in Mexico (olive green). \$1.00
- 3) FAM F-47 in Mexico (grey). \$1.00
- 4) FAM T-33A. \$1.00
- 5) FAM A-24 Dauntless. \$1.25
- 6) FAM C-47 Dakota. \$1.50
- 7) Kingfisher. \$1.25

### BOOKS

THE SAAF MUSEUM, 32 pages 8 3/4 by 6 inches, 20 photos, individual histories of aircraft in collection. \$1.25

The following items are available from the Dutch office (Welleweg 4, 3232AW Brielle, The Netherlands). Prices are in Dutch currency. Books are available at a substantial discount; send for price list for books, magazines, and photos. Payment may be made to the Dutch bank account ABN Hellevvetsluis 50.61.39.379 or with check or IMO made out to Fred Bachofner.

### 1/72- SCALE DECALS

RNeth Naval Air Service - black letters fr 2.50, white letters fr 2.50, and roundels fr 3.00. Complete set of 3 sheets fr 7.50.

### BOOKS

Hooftman, NEDERLANDSE Vliegtuig Encyclopedie: Fokker G.I, DC-2, Fokker D-21, etc.  
 Kaskinen, Stenman, & Niska, Suomen Ilmavoimien Historia, all titles.

### MAGAZINE BACK ISSUES

Hooftman, Vliegtuigparade  
 " Cockpit  
 Lundwist, Aviation Letter  
Flash

### PHOTOGRAPHIC PRINTS AND SLIDES

## SAFCH INTERNATIONAL EXCHANGE PROGRAM

To further international cooperation in promoting interest in the small air forces, the SAFCH has entered into agreements with several organizations. This cooperation takes on various forms but at a minimum consists of an exchange of publications with the SAFO printing subscription information and abstracts for all magazines received as part of this program. Listed below are those organizations currently cooperating with the SAFCH along with the most recent information about subscriptions. All prices are in US \$ unless otherwise specified. If you are interested in obtaining any of these publications, you might consider writing to them suggesting that you would like to sponsor the SAFCH membership of one of their members in exchange for a subscription to their magazine. Of course, where a large difference in price exists you should offer to send your sponsor additional material, but you will still save money while entering into an interesting and profitable correspondence. The organizations marked with a \* already have a sponsorship agreement with the SAFCH; in these cases you need only send \$4 to the SAFCH and I'll forward your request. (Note: The SAFCH subscription for each of these organizations is paid for by me personally, and is not part of the SAFCH budget.)

\*AVIATION SOCIETY OF AFRICA. ASA NEWSLETTER - in English, 12 issues per year, 21.0 by 14.5 cm (8.3 by 5.7 inch). Subscription \$5.50: PO Box 50413, New Redruth, South Africa 1452.

AUSTRIAN AIRCRAFT HISTORIANS. O.F.H. NACHRICHTEN - in German, 4 issues per year, 30.0 by 21.0 cm (11.8 by 8.3 inch). Subscription information: W. Schroeder, Alle Kannegasse 1/15, A-1150 Wien, Austria.

DANSK FLYVEHISTORISK FORENING. FLYVEHISTORISK TIDSSKRIFT - in Danish, 4 issues per year, 30.0 by 21.0 cm (11.8 by 8.3 inch). Subscription 50.00 kr: Hans Kofoed, Skt. Markus Alle 13.4, 1922 København, Denmark.

IPMS-AUSTRALASIA. MODEL CRAFT - in English, 4 issues per year, 27.0 by 20.5 cm (10.6 by 8.1 inch). Subscription information: PO Box 1187K, GPO Melbourne, Vic., 3001 Australia.

IPMS-BELGIUM. KIT - in French, 4 issues per year, 27.5 by 21.5 cm (10.8 by 8.5 inch). Subscription information: Jean-Pierre Timmermans, Avenue Gounod 87, 1070 Bruxelles, Belgium.

IPMS-CANADA. RT - in English, 12 issues per year, 30.0 by 21.0 cm (11.8 by 8.3 inch). Subscription \$6 in USA and \$7 overseas: Box 626 Stn B, Ottawa, Ontario, Canada K1P 5P7

IPMS-FINLAND. MALLARI - in Finnish with all photos and drawings captioned in English, about 4 issues per year, 30.0 by 21.0 cm (11.8 by 8.3 inch). Subscription for 4 issues \$4 plus \$1 for personal checks: Bergsidan 4, 02160 Westend, Finland.

IPMS-NEDERLANDS. MODELBOUW IN PLASTIC - in Dutch, 4 issues per year, 24.0 by 17.0 cm (9.4 by 6.7 inch). Subscription fl. 22.5: V. Lieflandlaan 76, Utrecht, The Netherlands.

IPMS-NORWAY. LIMTUBEN - in Norwegian with full English summaries and captions, 4 issues per year, 30.0 by 21.0 cm (11.8 by 8.3 inch). Subscription \$8: Jørgen Flood, Trudvangveien 32, 1320 Stabekk, Norway.

IPMS-SWITZERLAND. VIRUS PLASTICUS - in German, 4 issues per year, 30.0 by 21.0 cm (11.8 by 8.3 inch). Subscription Swiss f 22.: Pier Savini, Wardstr. 121, 8003 Zurich, Switzerland.

IPMS-UK. IPMS MAGAZINE - in English, 6 issues per year, 30.0 by 21.0 cm (11.8 by 8.3 inch). Subscription \$7 plus \$1 for personal checks: 48 Brookside Gardens, ENFIELD, Middlesex, UK.

IPMS-WASHINGTON DC. PRI-FLY. Subscription: PO Box 2352, Arlington, VA 22202.

MILITARY JOURNAL - in English, 6 issues per year, 11 by 8 1/2 inch (27.9 by 21.6 cm). Subscription \$10 US, \$13 all other countries: IGC, 218 Beech St., Bennington, VT 05201.

MODEL-AIRE INTERNATIONAL in English, published irregularly, 11 by 8 1/2 inch (27.9 by 21.6 cm). Subscription \$6 for 4 issues: PO Box 159, Olama, CA 94950.

# ASA NEWSLETTER

Jan 77 (20 pages). Photos: Sikorsky S-51 ZS-HBT; Trilander S7-AAA; RAAF P-3C '605'; Boeing 707 ZS-SAF; DC-4 ZS-IGC, Malawi Cessna 402B 7Q-YAF; Britannia 9G-ACG. Airline News; Register Review; Accident Report; Insignia (10) Gabon.

## KIT

#27 "Gloster Meteor 8" in Belgium service (6 pages, 9 photos, no drawings).

#28 "Gloster Meteor NF-11" in Belgium service (24 pages, 14 photos, 6 pages of drawings); outstanding article, includes history of Belgium night fighters, individual a/c histories, plus 8 photos and 2 pages of drawings of Meteor details.

## MODELCLRAFT

#2/3 77 (20 pages). "England to New Zealand Air Race" (3 pages, 3 photos, 2 pages of drawings). "Israeli A-4 Skyhawk" (2 pages including good 3-view of camouflage pattern). "RAAF Oxford '729'" (1 page with drawing). "Rapid VH-1AN" (1 page with drawing). "Indonesian A.F. C-47 Ambulance" (2 pages of drawings of AURI T-453). Editor's note: Article mentions that "ex RAAF Dakota s/n unknown". A photo of a Dutch C-47 coded T o 453 appears in Hoofman's VAN GLEN MARTIN EN MUSTANGS with the comment "DT-953 was VH-REG werd T-453". Same a/c?

## MODELBOUW IN PLASTIC

#1 78 (40 pages). "Dutch F-104G" (21 pages, 22 photos, 8 pages of drawings). Most photos and drawings are of details; including 2 photos of starter truck and a drawing of the tow bar; 4-view drawing of camouflages D-8343.

## O.F.H. NACHRICHTEN

#4 77 (25 pages). "Bucker Bestmann" (4 pages, 2 3-view drawings). "Arado Ar79" (4 pages, 8 photos, 1 2-view drawing). "Avia S-199 (5 pages of outstanding drawings of single and two-seat version - no markings; 2 photos). Harbich HA12/48 und Ha X11" (4 pages, 2 3-view drawings of these gliders). "Romeo Ro37" (4 pages, 1 3-view drawing, and 2 photos of a/c in Austrian service). "Bo 105C" (1 page with 3-view drawing).

#1 78 (40 pages). "Die Bucker 'Familie' in Osterreich" (3 pages). "SAAB J-29F" (7 pages including 3 pages of drawings of a/c in Austrian service, 1 photo). "Schulflugzeug Goths Go145" (6 pages including 2 pages of an excellent 4-view drawing). "Osterreichische Luftfahrzeugrolle" list of early Austrian register (15 pages includes 2-view of Fiat CR-20 A-63 and Udet Flamingo A-74; side views of Avis BS 11 A-16, Hansa Brandenburg C-I A-85, and Junkers F-13 A-2; photo of DC-2 A-500; and register up to A-150).

## MALLARI

#21 (8 pages). SAAF Sabre 6 and Mirage IIIEZ (1 photo each). Finish UTI-4 (2-seat I-16) (1 4-view). Russian Bf-109G (1 photo, 1 side view). Finnish Piper Arrows (2 photos and drawings).

#22 (8 pages). "Augusta Bell 206 Jet Ranger" (15 side views and 6 photos of Finnish and Swedish military, police, and civil Jet Rangers).

#23 (8 pages). "Fieseler Fi156" (12 side views, 2 3-views, and 6 photos of Finnish, German, and Czech Fi156).

#24 (8 pages). "Blenheim I" (6 side views, 2 3-views, and 6 photos of Finnish Blenheims). Photo of Vietnam 11-18 VN 8195.

#25/26 (16 pages). "Fouga Magister" (9 side views, 1 plan view, 7 photos of Finnish Magisters). "Finnish Flight and Squadron Badges" (19 photos and many drawings). Photo of Finnish Mi-8 HS-4.

## LIMTUBEN

#3 77 (24 pages). "Northrop N-3PB" (8 pages, 15 photos, 4 side views, 1 3-view of a/c in Norwegian service). "Republic RF-84F Thunderflash" (7 pages, 10 photos, 3 3-view drawings). Photo SAAB Safir U o AB. IPMS-NORWAY is marketing a 1/48-scale, vacuum-formed kit of the Northrop N-3PB. US \$7.50 or £4.00 to IPMS-NORWAY, c/o Tom Arheim, Asperudveien 11, Oslo 12, Norway.

## RANDOM THOUGHTS

#7 77 (12 pages). "Gooney Bird Sketchbook" (2 pages). "Canadian Military Aircraft A to Z Part 14 Avro Anson" (1 page, 2 photos).

#8/9 77 (20 pages). Special Dieppe Issue. "RCAF over Dieppe" (2 pages, 5 photos).

#10/11 77 (24 pages). "The Fawn in the RCAF" (13 pages, 8 photos, 1 3-view, 26 side views). "CF-104, Part 3" (2 pages of drawings of the new camouflage scheme).

## FLYVEHISTORISK TIDDSKRIFT

#1 78 "KZ VII som militaerfly" (4 pages, 8 photos, 1 3-view drawing, individual a/c histories). "Hvorfor der ikke er bevaret en Maurice" (2 pages, photos of Farman, Vicker FB 5, & LVG BIII in Danish markings). "Cat-alina L-861" (1 page, 2 photos). Photo of DH60 Moth T-DMØL.

## VIRUS PLASTICUS

#1 77 (56 pages). "Ejercito Del Aire Espanol" (2 pages).

#2 77 (52 pages). "Swiss Mirage IIIS" (3 pages, side & plan views of D-2311 in overall Grau (Humbrol HJ2)).

#1 78 (24 pages). "Flugalarm Grengverletzungen uber der Schweiz im 2 Weltkrieg" (4 pages including list of a/c interned in Switzerland during WW II). "Le Camouflage des Chasseurs Yak du Groupe de Chasse Francais 'Normandie - Niemen'" (7 pages, 20 side views of Yak variations - no markings). "Swiss F-5E Chronology" (2 pages). "Morane-Saulnier MS-540" (3-view drawings of D-3802, J-401, J-406, and J-405 (bubble canopy) in Swiss markings).

## MILITARY JOURNAL

Vol. 1 No. 6 "No. 79(IF) Sqn. RAAF" (4 pages, 16 photos, a/c list). "Captured Nieuport N.17s" (1 page, 4 side views - 3 German and 1 Turkish). "TS-1 (Shche-2)" (2 pages, 2 photos, 1 3-view drawing with details).

## MODEL-AIRE INTERNATIONAL

Vol. 2 No. 9. (24 pages). Drawings of Bulgarian Bf.108B, French Sopwith 1 1/2 Strutter, Finnish Bf.109G, Algerian MiG-15 & Magister, Dominican B-17 G & C-46A, German DH 4, RFC Halberstadt D.II, Kit List (1/72 scale) from Ader Eole to Avro Canada CF-100.

## KONTAKTGRUPPEN

Swedish Aviation Historical Research Group

"The Kontakt-gruppen was established in 1977 and is today the biggest organization of its kind in Sweden, with some 800 members, most of them from inside Sweden. But we also have members in Norway, Denmark, England, Austria and Canada. Our intention is to promote interest in the history of Swedish aviation, military and civilian. We are also collecting aircraft of historical interest, and working for an aircraft museum here in Gothenburg. Today our collection consists of about 15 aircraft and sailplanes, among them Percival Proctor, Focke Wulf 44, Tiger Moth, GV 38 (Rearwin 9000), StinsonReliant, Vertol 44 helicopter, SAAB 29. We are now intensifying our efforts to complete the series of military trainers used in the RSAAF. For

this reason we are looking for a North American NA16-4M (forerunner of the Harvard/Texan). Unfortunately, all trainers of this type were scrapped after passing out of service with the Flygvapnet and we haven't a single one left in Sweden. Does any of your readers know about one in the USA? No matter in what condition!

"We also have a fairly good collection of photos and aircraft records.

"Our magazine, KONTAKT, is published 5 times a year and each issue usually contains a presentation of a specific type of aircraft, with history, drawings, photos and production lists, etc. Kontakt-gruppen is a nonprofit organization and the membership fee is mainly to cover the production costs of our magazine. Europe US \$9. Overseas US \$10."

Peter I G Kempe  
Kontaktgruppen, Box 4015, 422 04 Hisings Backa, SWEDEN





# SIBERIAN ODYSSEY

The American L.W.F. Model V with the Czechoslovak Legions in Russia

Text, Drawings, and Photos by Vlastimil Schildberger

Editor's notes: Suspended from the rafters of the National Technical Museum in Prague, alongside a Russian Anatra DS and a French Spad 13, both carrying the white-centered roundels of the early Czechoslovak Air Force, is a large, two-seat biplane marked with the insignia of the US Army Air Service. While obviously of WWI vintage and of American design, only the most knowledgeable of aviation enthusiasts would be able to identify this apparently geographically misplaced aircraft as the product of the LWF (Lowe, Willard and Fowler) Engineering Co: of College Point, Long Island. Once identified, a quick check in Swanborough and Bowers' "United States Military Aircraft Since 1909", reveals that the US Army bought 23 LWF model V's before WWI and another 112 in 1917 and 1918. But, how did one of these aircraft find its way to the heart of central Europe and why does it still bear the USAAS insignia? The answers to these questions, even more fascinating than the questions themselves are supplied by SAFCH member Vlastimil Schildberger.

Before turning to the story of this LWF, it is useful (especially for our American readers) to briefly outline the history of the Czechoslovak Legions in Russia during and immediately after WWI.

During the early stages of WWI, Czechs and Slovaks, conscripted to fight in the Austria-Hungarian Army deserted, in mass, to the Russians. They realized that the only hope for independence for their homeland was the defeat of the Austrians and the dissolution of the Dual Monarchy. Joined by Czechs and Slovaks living in Russia, they soon constituted a sizable army that distinguished itself during the fighting on the Eastern Front in early 1917. However, the Russian Revolution and the resulting collapse of the Russian Army soon made the position of the Czechoslovak Legions untenable. Fighting a series of masterful rearguard actions against the advancing Austrian and Germans, the Legions managed to extricate themselves from the Ukraine and withdrew to the East into the White Army's cauldron of the fighting between the Red and White Russian Armies. Possessing the only disciplined military force in central Russia, the Legions soon found themselves in control of the entire Trans-Siberian Railway with forces distributed from the Ural Mountains to Vladivostok on the Pacific coast. By this time it was clear to Western leaders that the White Army was incapable of gaining control of Russia without extensive outside assistance. The leaders of war-weary France, England and USA knew that it would be political suicide to send in large numbers of Allied Troops. There followed a period of shameless exploitation of the Legions in the hopes that the Czech and Slovak soldiers could save Russia for the White Russians. However, the vacillation of the Allies and the military and moral bankruptcy of the White Russians soon brought an end to this quixotic dream. Early in 1920, after a half-decade of fighting, the Czechoslovak Legions embarked from the harbor at Vladivostok, leaving the snow and ice of Siberia for the green fields and meadows of Bohemia, Moravian and Slovakia.

(An excellent source of information about the Czechoslovak Legions, the fighting between the Red and White Armies, and the Allied intervention is the book "The White Armies of Russia" by Stewart.) With this historical background, we are now ready to begin the story of the exotic LWF which hangs in Prague's Technical Museum.

In 1918, the Staff of the "Czechoslovak Legions in Russia" resigned to a long stay in Siberia, decided to improve their military posture by establishing an air component. Since the first step was to obtain sufficient numbers of aircraft suitable for the training of pilots, Col. Hurban, a member of the Staff, was sent to the United States to procure aircraft.

Pending the arrival of aircraft, the "I. Letecký Oddíl" (1st Air Detachment) was activated in July 1919 on a field near the railway station "Druha Ricka" (Second River). The commanding officer was Capt. Vlastimil Fiala, his deputy was Lt. Teray, and the executive officer was Capt. Skala. Flying Officer Sycek and 15 soldiers of the guard completed the complement.

In December 1918, the aircraft ordered from the USA arrived at Vladivostok aboard two ships. The boxes containing the aircraft were loaded onto 35 railway flatcars and transported to the base of the 1st Air Detachment.

Since the headquarters of the 1st Air Detachment had decided that the field at Druha Ricka was unsuitable for flight operations, the neighbouring frozen bay was designated as a runway. However, flight operation never took place at Druha Ricka, for the Staff of the Czechoslovak Legions in Russia issued orders forbidding the opening of the boxes of aircraft. In mid-February 1919, the 1st Air Detachment was transferred to a new base at Okeanskaja (Okeanskaya) a few miles from Vladivostok and the boxes of aircraft were stored in a nearby abandoned factory.

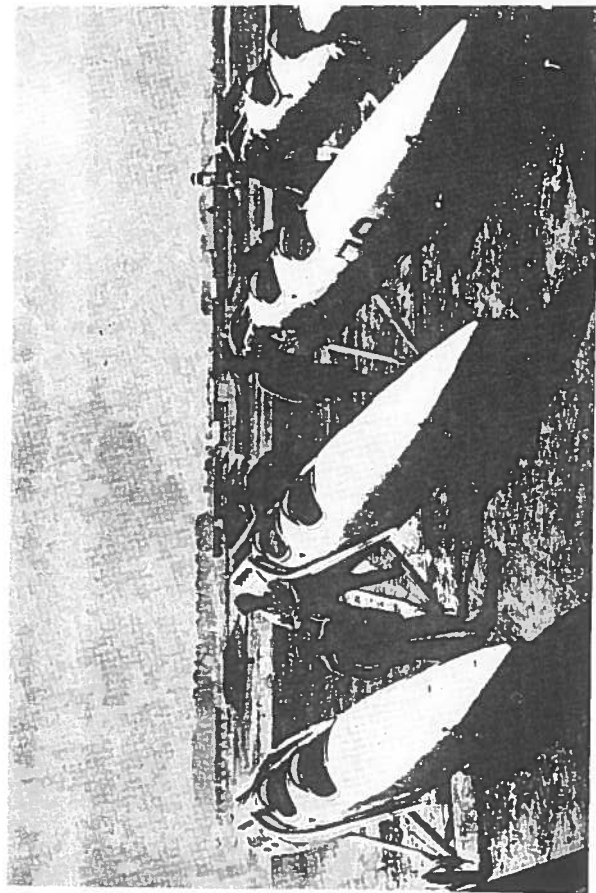
In spite of the strict prohibition by the Staff, the boxes were opened under the pretext of "checking the delivered material." When the boxes were opened, it was found that they did not contain the aircraft ordered by Col. Hurban, but instead they contained 28 obsolete and well-worn LWF aircraft. However, the 1st Air Detachment was so anxious to get into the air, that they decided to risk the displeasure of the Staff and one aircraft was prepared to make a first flight on 7 March 1919 to mark the birthday of Tomas Garrigue Masaryk, the first president of the newly independent Czechoslovak Republic.

On 7 March 1919, the first Czechoslovak aircraft to fly in Siberia was pushed out onto the ice of the frozen Ussuri River. The aircraft still carried the US insignia on its wings, but Sgt. Hartman had painted the appropriate letter "1" in black on both sides of the fuselage. On the undersurface of the bottom wing appeared the large black letters T.G. MAS on the port side continuing with ARYK on the starboard side.

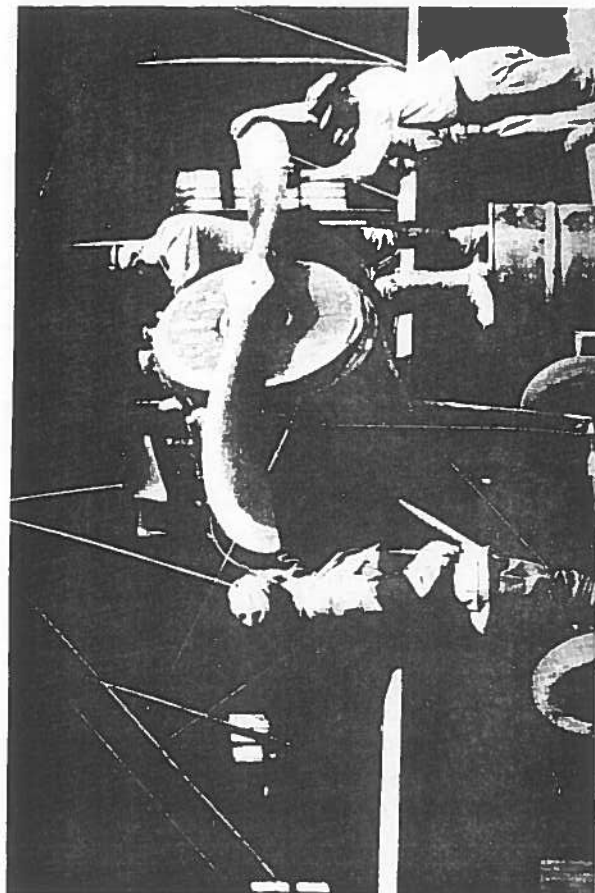
Despite the fact that the worn-out engine could not be coaxed to within 100 rpm of its normal operating specification, the LWF, piloted by Capt. Fiala with Sgt. Hartman aboard, took off at 0800 hours. The plane made a turn over the frozen sea. Suddenly, at an altitude of 150 meters, the plane went into an uncontrolled dive. At 50 meters the pilot was able to pull the aircraft out of its dive but the plane again became uncontrollable and began to climb. It then lost speed and dashed onto the ice. Both fliers were badly injured; one of Capt. Fiala's legs had to be amputated and Sgt. Hartman suffered a severe spinal injury. Both men were transported to their homeland via Japan in mid-1919. The LWF No. 1 was totally destroyed.

Shortly after this tragic event, the Staff of the Czechoslovak Legions in Russia finally gave permission to open the boxes and prepare the LWF's for service. Eighteen LWF's were sold to the White Russians. Of the 9 aircraft retained by the 1st Air Detachment, six had the black numbers 2-7 painted on the fuselage sides and were prepared for flight operations while the remaining three were set aside for spare parts.

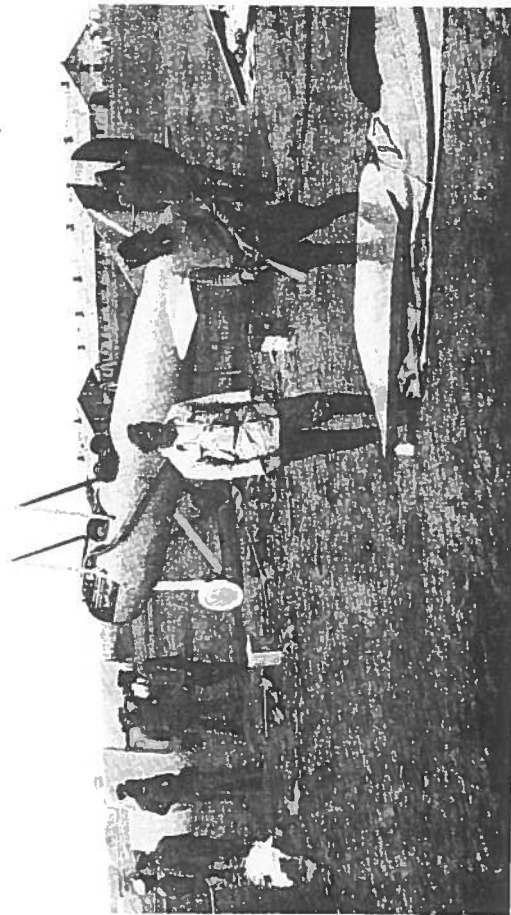
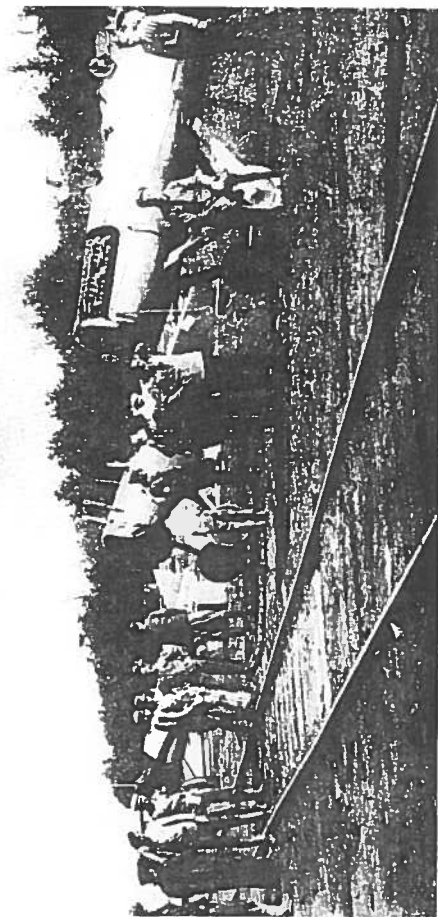
On 6 May 1919 all nine aircraft were loaded on railway flat cars and the 1st Air Detachment, under the command of Capt. Jaromir Skala, left its base at Okeanskaya and headed east along the Trans-Siberian Railway. During a stop at the railway station at Petla near the town of Chabarovsk (Khabarovsk), LWF No. 5 was destroyed by a fire and several other aircraft sustained damage.

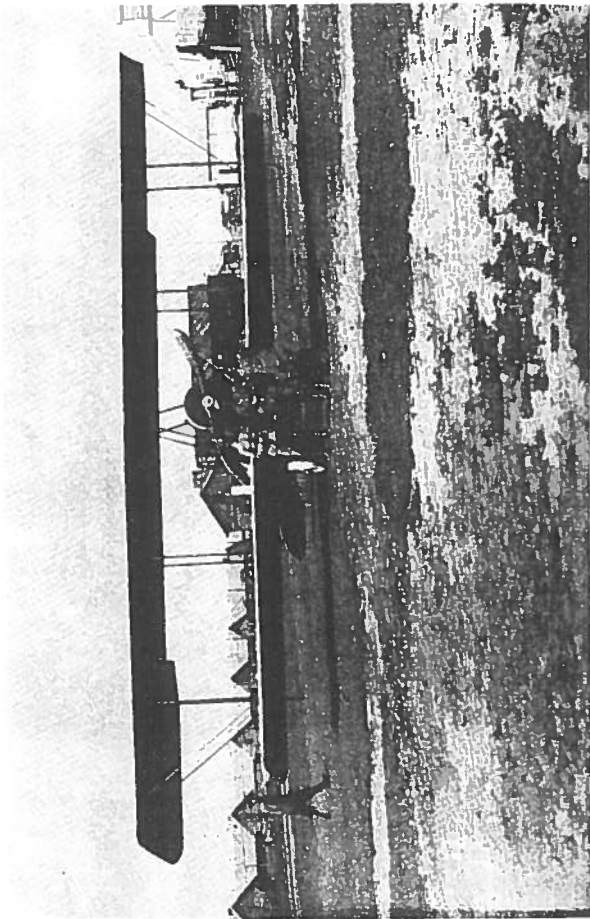


LWF Model V's with the Czechoslovak Legions in Siberia - 1919.

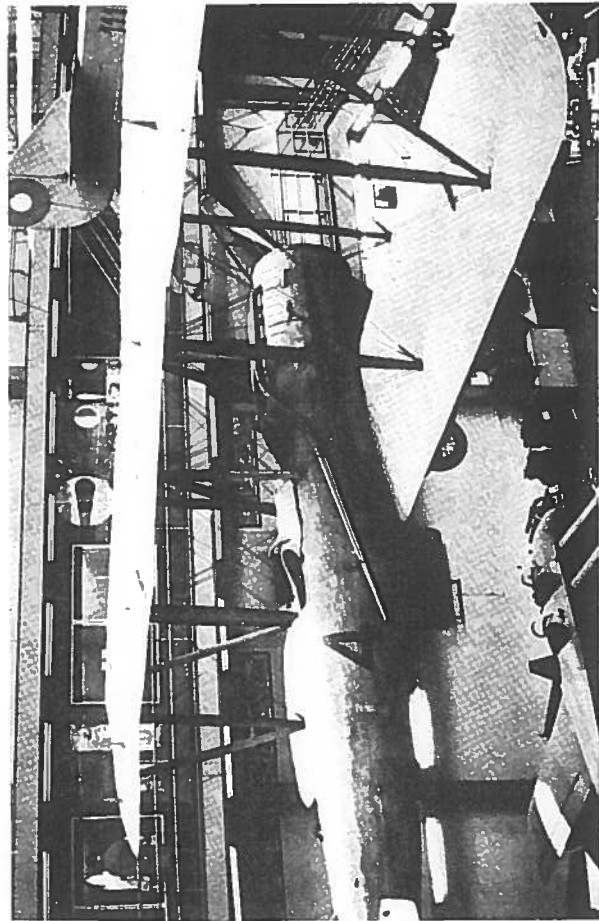


LWF Model V's with the Czechoslovak Legions in Siberia - 1919.

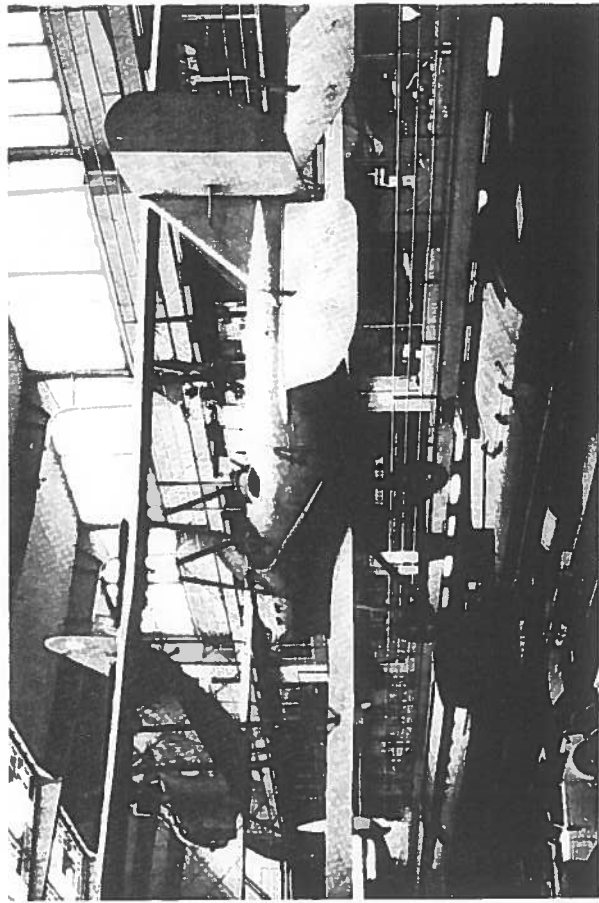




LFW Model V's with the Czechoslovak Legions in Siberia - 1919.



The Czechoslovak LFW Model V on display at the National Technical Museum, Prague.





On 31 May 1919 the 1st Air Detachment arrived at Omsk deep in the heart of Siberia where they joined the "Ceska Letecká Skola v Omsku" (Czech Flying School at Omsk).

The Ceska Letecká Skola v Omsku had been activated the previous month under the command of Capt. Melc, a skilled Czechoslovak pilot who had served in Russia since 1917. The staff of the school consisted of two flying instructors, Lt. Knopp and Lt. Hanek, one instructor for reconnaissance training, one meteorologist Lt. Vipler, 199 ground crewmen and 46 soldiers of the guard. Aircraft on hand were one Nieuport 21 and one Farman 30. The first class of 18 young cadets began training on 6 May 1919 and the first training flight was realized on 12 May. However, due to bad weather, only 10 training flights were recorded by the end of May.

Since both aircraft were in poor physical condition, the arrival of the 1st Air Detachment with its LWF's was greeted with great enthusiasm. However, the LWF's were slow to enter service because of difficulty in obtaining fabric to repair damage incurred during transportation from Okeanskaya to Omsk.

On 3 June 1919, the first LWF, No. 3, was ready for service, and Lt. Knopp conducted the test flight. This flight, observed by the officers of the French Military Mission, was a complete success.

On 5 June, Lt. Knopp, with the meteorologist Lt. Vipler, again took LWF No. 3 on a test flight. At an altitude of 2000 meters the engine stopped and the plane went into a spin. Lt. Knopp succeeded in pulling the plane out of its dive at 900 meters and was able to make an emergency landing. The plane was trucked back to base for repairs.

On 7 June LWF No. 4 was ready for duty and it was joined by No. 7 on 14 June.

The 18 flying cadets training under the command of Capt. Melc flew LWF 3, 4 and 7 as well as the Nieuport 21. (LWF's 2 and 6 were still not ready due to the shortage of fabric.) Training was carried out an exhausting 20 hours per day (from 0300 hours to 2300 hours) and according to an official record dated 17 July 1919, there were more than 350 training flights on the LWF's between 24 June and 14 July 1919.

At the end of July, Headquarters decided to transfer the Czech Flying School to a new base at Nikolsk-Ussurik (Nicol'sk-Ussuric). The LWF's and the personnel of the flying school reached their new base on 15 September 1919, and by 19 September training was proceeding at full speed. With all 5 LWF's now operational, more than 300 training flights were made every week by a class of 36 pilots and 25 observers.

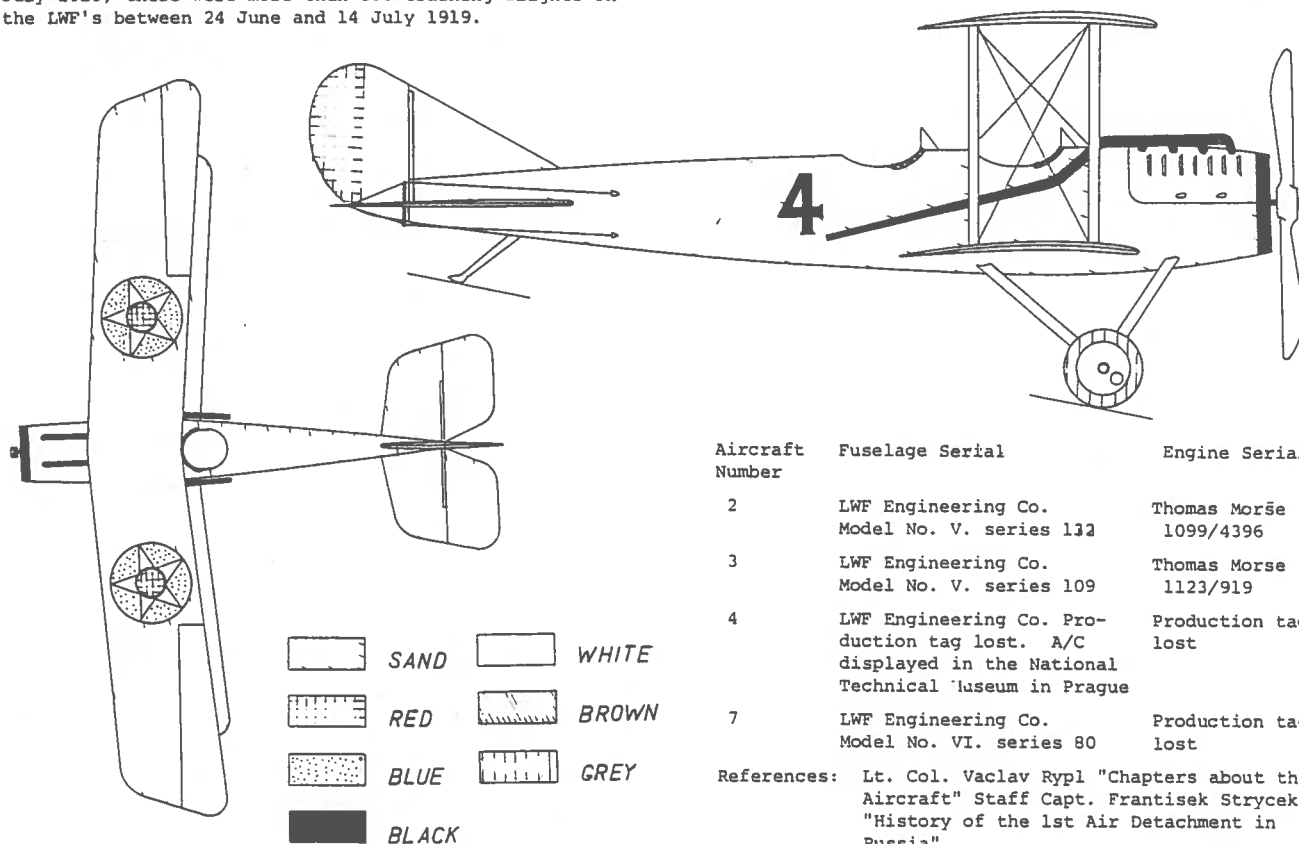
At this time Mr. Hlavsa, a Czech artist, painted the First Czechoslovak insignia on the LWF's; a red band on the rudder. The US national insignia remained on the wings.

On 25 November 1919 during a training flight the engine of LWF No. 6 stopped and the plane crashed. Both crew members survived but the aircraft was totally destroyed and had to be scrapped. From 26 November on, training was halted because of bad weather and temperatures as low as -27°C.

The repatriation of the personnel of the Czech Flying School began in 1920 when on the night of 6 January, two trains overloaded with personnel along with LWF Mos. 2,3,4 and 7 left the railway station at Nikolsk-Ussurik. The train reached the harbor at Vladivostok on 7 January and the four LWF's were lifted aboard the ship "Silesia". At 1430 hours on 10 January 1920, after nearly two years in frozen Siberia, the men of the Czech Flying School and their four LWF's left the harbor of Vladivostok for the long voyage back to the homeland via Marseilles, France.

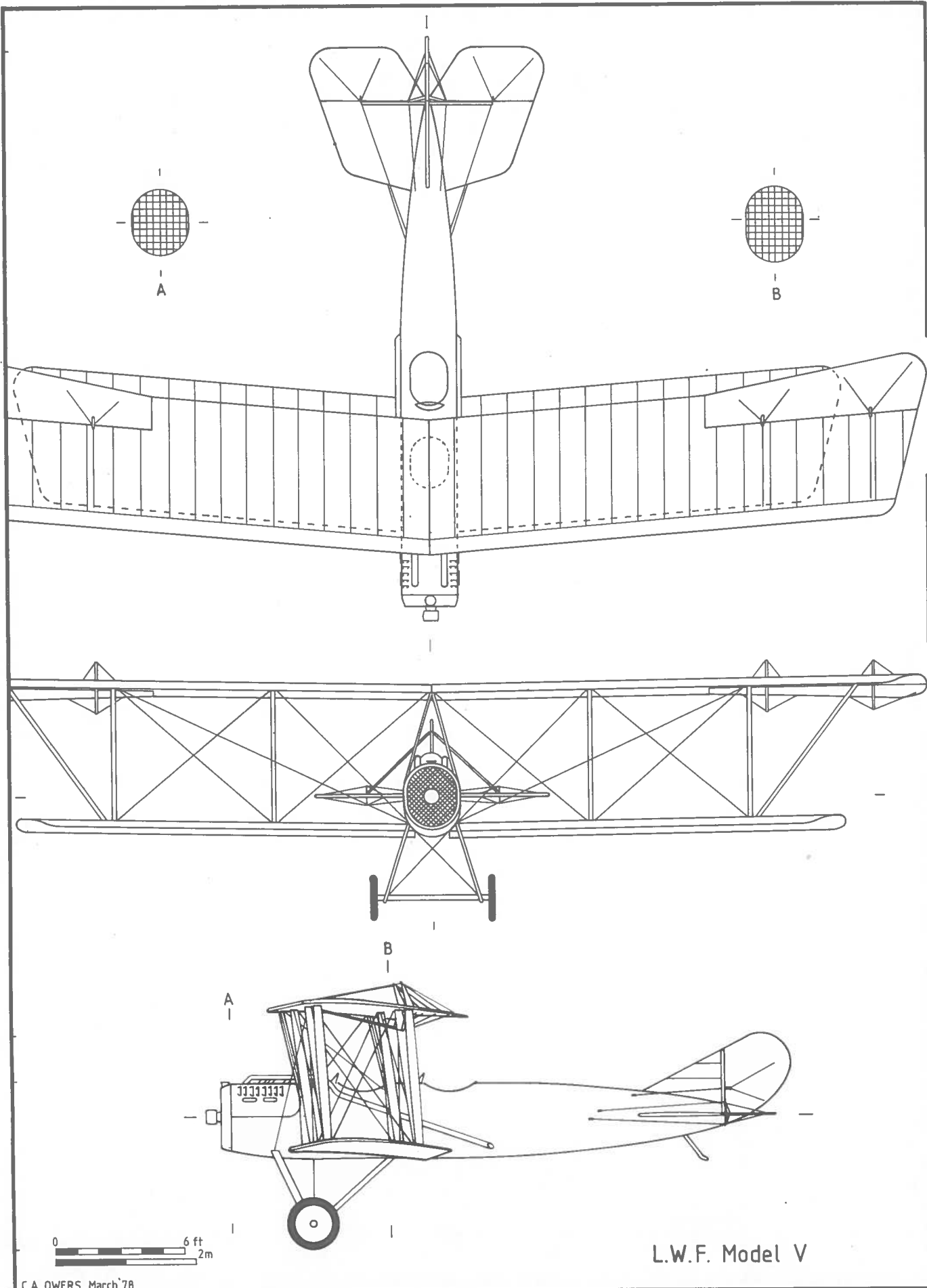
After their arrival in Czechoslovakia, the LWF's were stored on the airfield at Olomouc. According to Record No. 677 of the "Main Military Air Warehouse" at Olomouc, dated 13 November 1920, the airframes of the four LWF's were in poor condition and should be scrapped. Perhaps, 13 November 1920 is the date on which the LWF's were officially withdrawn from Czechoslovak service.

The obsolete and tired LWF's had served the men of the Czechoslovak Flying School faithfully under the most difficult operational and weather conditions. It is fitting tribute to the courageous men of the Czechoslovak Legions that this gallant little aircraft has been preserved.



Aircraft Number	Fuselage Serial	Engine Serial
2	LWF Engineering Co. Model No. V. series 132	Thomas Morše 1099/4396
3	LWF Engineering Co. Model No. V. series 109	Thomas Morse 1123/919
4	LWF Engineering Co. Pro- duction tag lost. A/C displayed in the National Technical Museum in Prague	Production tag lost
7	LWF Engineering Co. Model No. VI. series 80	Production tag lost

References: Lt. Col. Vaclav Rypl "Chapters about the Aircraft" Staff Capt. Frantisek Strycek "History of the 1st Air Detachment in Russia".



L.W.F. Model V

## L.W.F. Model V Described

The L.W.F. company was formed in 1915 by Edward Lowe Jr., Charles Willard, and Robert Fowler, each member contributing the initial letter of his surname to form the company name. The chief asset of the company was its "laminated wood fuselage" developed by Willard. After the pioneering founders had been forced out of the company by large financial interests, the legend was promoted that L.W.F. stood for "Laminated Wood Fuselage", although pilots who flew the type referred to it as "lumber, wire, and fabric".

The first product of the new company was the Model V designed by Willard and employing the monocoque laminated fuselage. The aircraft was quite handsome for its time and great things were expected of it. In service it proved too stable to be of much use as a combat trainer, however the great strength of its fuselage construction was appreciated in the event of a crash.

The fuselage was constructed of three layers of spruce ply. The first was laid longitudinally whilst the other two were spiralled to the right and left respectively. Between each layer was a scrim layer of treated silk, the whole construction being covered with fabric and treated with several coats of a waterproof compound and four coats of spar varnish. The fabric-covered wings were parallel in plan-form with pronounced stagger and sweep-back. The upper wing had a greater span than the lower and the overhang was supported by cables attached to king-posts above the outer pair of interplane struts. On some aircraft these were replaced by a pair of sloping struts from the base of the outer interplane struts to the upper wing. The wings were constructed in four panels. The upper two connecting at the fuselage centerline to the apex of two pairs of inverted V cabane struts. The lower panels attached directly to the fuselage. Flying and landing wires were arranged in pairs. A drift wire ran from the front outer interplane strut to the fuselage at the attachment of the front landing gear leg. Each wing was constructed around two spars. The leading edge was covered with ply on the top surface of the wings back to the first spar located 9 inches behind the leading edge. Four feet separated the two spars. Large ailerons were hinged directly onto the rear spar of the upper wing. The tail sur-

faces were constructed of steel tube and covered with fabric. Power was supplied by a 135 hp Thomas V-eight. Other variations of the design were apparently limited to a change of power plant. The V-3 was powered by a 140 hp Model 5 Sturtevant.

Twenty-one Model V's were ordered for the U.S. Army and limited production was commenced. Six were in service when the U.S.A. entered World War I and more were ordered. The total number produced is not known but has been put at twenty-three by one source. In view of the initial Army order, it is thought that this figure is incorrect. Likewise, several are reported to have been sent to France during the War, but this is doubtful, the type being relegated to ground instructional airframes and pilots being forbidden to fly it at some U.S. flying fields. One was entered in the First Transcontinental Reliability Tour in 1919 by E. W. Springs, the World War I fighter pilot and author of many books on that period of aviation. The Liberty V-eight is also reported to have been fitted to a Model V and with this powerplant it is reported to have outperformed the British De Havilland.

**SPECIFICATIONS:**

WINGS: Span Upper 46 ft 6 in      Span Lower 38 ft 8 in  
Sweep-back 2 ft 0 in      Dihedral 1°  
Gap 6 ft 6 in      Area Mainpalnes 490 ft<sup>2</sup>  
Area Ailerons 38 ft<sup>2</sup>

TAILPLANE: Span Elevators 11 ft<sup>0</sup> in  
Area Elevators 23 ft<sup>2</sup> Area Fin 5 ft<sup>2</sup>  
Area Rudder 10 ft<sup>2</sup>

FUSELAGE: Length 23 ft 6 in    Depth 3 ft 6 in (max)  
Width 2 ft 8 in (max)  
Length from propellor boss to rudder  
approximately 27 ft 2 in

ACKNOWLEDGEMENTS: Special thanks to Robert Casari, Roy D. Meyers, and Warren Oberhaus

Colin A. Owers (SAFCH #261)

[illegible]

use in training Philippine pilots. The one-of-a-kind NASA RF-8A, currently stored at the Dryden Flight Research Center, will be renovated by Vought for the year-long training program and then returned to NASA.

Peru: FLIGHT INTERNATIONAL (14 Jan. '78) reports that the Peruvian AF is disappointed with the avionics fitted to its newly acquired Su-22s.

Portugal: An order has been placed for an additional 3 C-130H a/c to supplement the 2 already in service.

Spain: The Navy has ordered 5 more AV-8A Matadors to join the 5 already in service. Negotiations between Dassault and Spanish defense officials are in an advanced stage for the order of an additional 48 Mirage F.1 fighters. The Spanish AF already operates 15 Mirage F.1Cs and has 10 more on order. An Orion (221-21) caught fire while landing at La Parra de Jerez on 8 June '77. All 5 crew members were killed. A Super Seata (C10C-108) crashed at the Bardenas Reales target range on 9 Sept. '77.

Sudan: Fourteen Mirage III fighters have been ordered. An order has also been placed for 14 Mirage 50 fighters with an option on a further 14.

Somalia: According to a London newspaper, Somalia has made a deal with the undercover arms market to purchase 95 ex-South Vietnamese helicopters. The deal reportedly provides 25 Huey Cobras and 70 Bell 206's. It is said that an enterprising South Vietnamese colonel had these helicopter flown to Thailand and they went on sale through a network of dealers and middlemen.

Thailand: Two Swearingen Merlin IVA's have been ordered for use by the royal family.  
An additional 6 OV-10 COIN a/c will be obtained to supplement the 32 already in service.  
Also, 13 more Bell UH-1H helicopters are on order.

Turkey: A further 40 McDonnell Douglas Phantoms will be received - 32 F-4E and 8 RF-4E.

Uganda: The Police Force has received 6 FAA-202 Bravos.

Yemen: Two F-5B's will be transferred to Yemen by the Royal Saudi Air Force. The RSAF is also considering the sale of 12 F-5E Tiger IIs to Yemen.

Compiled by Fred Bachofner (SAFCH #15)

## AVIATION MAGAZINES FROM AUSTRALIA AND NEW ZEALAND

Resume MODEL CRAFT IPMS (Aust) from #1 1971. All articles in the main include drawings, photographs and in some cases details of conversion. Page 3 editorial and normally details for drawings on page 2.

#1 Jan-Mar 71: P2 Drawings, complete detailing and color chip for RAAF Macchi trainers, P6-10 "DAP Beauforts", P10 lower HS 125 conversion, P11 Photo page (2) HS 125 (2) Hudons, (1) Vultee Vengeance as Ju87 for film TORTURK, (1) RAAF Alouette 1960's, P12 HS 125 drawings, P13-15 RAAF Miscellany, Rear Cover Photos (3) SE5A, (1) Martin Mariner (1) Curtiss Shirke (1) Viscount 34 Sq.

#2 Apr-Jun 71: Cover Photo Westland Wapiti IIA 1930, P6 Photo page (2) Wapiti (2) RAAF Dragon Rapides 1935 (1) P-40 "Little Audrey" (1) Kinnairds P-51, P7-9 Wapiti including ski and float versions, P10-11 Target Tugs Drawings and photos only, P12 Conclusion of Wapiti article, P13 4 sideviews RAAF Mustangs, Rear Cover Lower photo CV-Y Mustang 3 Sqdn.

#3 Jul-Sept 71: Cover Photo RAAF Antarctic Flight Beaver, P2 Malaysian Sabres incl. color chips, P4-7 "DH 84 Dragon", P9-14 "Antarctic Aviation" Drawings for Gipsy Moth, Kingfisher, Auster, Beaver, Dakota, Hughes 500 inc. color chips, Rear Cover Photo Antarctic Auster & Anson 1944.

#4 Oct-Dec 71: Cover Photo Mustang VH-UWB Bankstown '62, P2 Swedish Harvards drawings and details, P7 Photos (3) Adastra Aerial Survey Hudsons, P8-9 Drawings of RAAF Tiger Moths, P10-14 "CAC Mustangs Mk 21 A68 to G-ARUK", P15-17 "DH Vampire", P18 Photos (3) Vampire, (1) Tiger Moth (2) AAS Hudsons, P19-22 Adastra Aerial Surveys Hudsons inc. color chips, Rear Cover RAAF Vampire.

#1 Jan-Mar 72: Cover Photo 02 (VH-SUR) second prototype Nomad, P2-365 "Bristol F.2B 1 Sqdn AFC", P4-5 "PZL P-24 Royal Hellenic Air Force", P14-15 "RNZAF Skyhawks", P16 Photos RAN and RNZAF Skyhawks, Rear Cover Sopwith Camel Capt A.H. Cobby 1918, Avro 504K Point Cook 1920.

#2 Apr-Jun 72: Cover RAAF Vampire T.35 (color), P2-3 "RAAF P-38", P4-5 "Waddy DFC", P6-8 GAF Nomad inc color chips, P11-13 "Twin Boom Tutor" T33-T35, P14-17 "The Mosquito", P22 Sea Hornet 33 Sqdn RAF Malaya, Rear Cover 3 drawings AFC Color.

#3 Jul-Sept 72: Cover CAC Mustang VH-FCB Color, P2 Drawings Meteor U.15 1/72, P11-15 "The Mosquito PR Mk16-42, P18-19 "Bobby Gibbs".

#4 Oct-Dec 72: Cover Mirage III A3-2 RAAF Black & Yellow (Color), P2-3623 "Cessna 180 Aust. Army", P6-8 "CA-15", P10-16 "Mirage III" inc color chips, P19-23 "Lincoln B Mk30".

#1 Jan-Mar 73: Cover Pair of Winjeel trainers over Point Cook, P10-15 "Winjeel", P16-22 Beaufighter "Green Ghost Sqdn" inc 18 photos individual rudder decorations.

#2 Apr-Jun 73: Cover Pair of RAAF Phantoms (Color) also Rear, P2-3 "Taylorcraft Model F. Auster MkIII", P4-6 "RAAF Phantoms", P9-10 "Dual Control Firefly", P11-16 "Antipodean 170's" inc color chips, P22-23 "Angles of Mercy, RAAF Ambulance Aircraft".

#3 missing

#4 Oct-Dec 73: Cover RAAF C-130E Color, P4-11 "Sky Tramp" Bristol Freighters in Australian civil markings, P12-17 624 "Super Stretch" Lockheed L100-30 conversion details and 1/72 drawings, P25 "Percival P31C Proctor MkIV RAAF".

#1&2 Jan-Jun 74: Cover P4-17 "CAC Avon Sabre", P36-40 "Tiger Ambulance" Tiger Moth, P43 2 photos RAAF Kingfisher.

#3 missing

#4 Oct-Dec 74: P9-11 "Halifax BII Series 1 (Special) BV Series 1 (Special) RAAF".

None published in 1975.

#1 Jan-Mar 76: Cover SAAB AJ-37 Viggen, P2-3 "RAAF Ox-fords", Rear Cover 2 photos SAAB AJ-35F Drakens.

#2 Apr-Jun 76: Cover RAAF Caribou, P2-3 B-26 Invaders in Algeria, P7-9 "Bostons of 22 Sqdn RAAF", P10-11 Photopage Finnish Air Force 11 photos Fi-56, P-40, Fokker DXXI, Fiat G50, Hurricane MkI ski, Lysander, Blenheim. P12 & Rear Cover "Kingfisher in the Antipodes" Pt. 2 10 photos.

#3 Jul-Sept 76: Cover SBD-5 25 Sqdn RNZAF, P4-7 "Dauntless in RNZAF Service", P8-9 Hybrid (FG-1D) Corsair, Rear Cover RAAF F-111.

AIRCRAFT Jan 78: World Roundup - Ducted Propulsor Aircraft; Top Aerobatic Pilot Dies; Local Sales Push for Nomad. Nomad Supplement (8 pages). Photos - 4 RAN Skyhawks in flypast at Nowra; PNG Defence Force Nomad; RNZAF Dakota; RAAF, RCAF & RNZAF C-130's and RNZAF Orions in exercise AUCKEX 77. Vintage Album - Be-2e of 1 Sqn AFC Egypt 1917.

AIRCRAFT Feb 78: World Roundup - Nomad Wins Argentine Order. LATROBE VALLEY FLY IN; color photos - Tiger Moth A17-704, Auster NAVY-857 & A11-301, Waco US VH-ALF 423234; b&w photos - Ryan VH-AGR in NEIAF scheme. Vintage Album - 3 Southampton II at Corio Bay, Victoria Nov 28.

AIRCRAFT Mar 78: RAAF's FATHER REVEALS THE FACTS (a review of the autobiography of Sir Richard Williams, founder of the RAAF in 1921). Photos - 9 Seagull V's of No. 5 Sqn RAAF over Sydney in 1938; Flt Lt Cyster and Tiger Moth; RAAF P-3C Orion. Vintage Album - Short Rangoon Flying Boots Oct 34. Book Review - "RNZAF - The First Decade 1937-1946" by Charles Darby; volume of pictures with very little text. from Kookaburra, about \$A13.00.

AUSTRALIAN FLYING Jan/Feb 78: POINT COOK FLY IN - 4 pages of text and photos; Sikorsky S-51 RAN, Wirraway B-QE, Tiger Moth A17-704 without civil marking (a/c on loan to RAAF museum from the Long collection). THE FLEET AIR ARM'S OF JUBILEE SALUTE - 4 pages of photos TA-4G of HMAS Albatross, Nowra; Grumman S-2G of VC851; Kiowa in Army colors with Navy markings; 2 VF805 Skywawks; HS 748 of VC851; Westland Scout & Fairey Gannet from the Nowra Museum display. PERTH AND BACK IN A HERCULES - 5 pages of text & photos; Tony Rees, private pilot, joins crew of a Hercules for a sortie across Australia with the crack RAAF heavy transport unit No. 37 Sqn who recently notched up 100,000 accident free flying hours. Book Review - "Australia in the Air" by Greg Copely; a history of aviation in Australia.

AUSTRALIAN FLYING Mar/Apr 78: THE WISPERING DEATH - 4 pages of text and photos of RAAF Beaufighters in WWII from action in the North Atlantic, Europe & Scandinavia to their first attacks over Portuguese Timor on 17 Nov 42. Action on Dodo in the Aru Islands and later attacks on Japanese bases in Burma including pumping station at Promé. DUTCH SALVAGE ATTEMPT ON WWII RAAF AIRCRAFT - 8 pages & 8 photos; specific a/c mentioned: Lancaster of 463 Sqn crashed on 3 Jan 44; 2 Wellingtons of 460 Sqn shot down 3 Jul 42 all crashing in the IJsselmeer (Zuider ZEE) creating the possibility of recovery. The article relates a complete normal days work, and also a full list of RAAF aircraft and locations of crash sites. Photos - Searchmaster Lima (Coastal Surveillance Nomad) test a/c all white and Army Missionmaster; C-130 RSWAF in Angola; first RAAF P-3C Orion; Westland Lynx for Brazilian Navy; 4 RAAF Beaufighters; Saab (Ja) 37 Viggen; Sopwith Pup N5180.

NZ WINGS Oct 77: RNZAF BRISTOL FREIGHTERS IN SINGAPORE - 5 pages of text & photos. Photos - camouflages Freighter NZ5910; natural metal Freighter in Thailand 1962; two US Navy LC-130 160740 and '741 of VXE-6 at Christchurch in September; Freighter NZ5910; two Freighters and six RAAF C-130's at Tan Son Nhut in 1975; 707B-2406 Peoples Republic of China at Auckland in September; seven RNZAF Harvards at Wigram awaiting disposal.

NZ WINGS Dec/Jan 78: ENFORCING THE 200 MILE LIMIT - 3 pages of text and photos. AVIATION FIELD DAYS AT HAM-ILTON - 3 pages of text and photos. RNZAF KEPT BUSY IN WARGAMES - 2 pages of text and photos. THE FINAL ACT; FAREWELL TO RNZAF DAKOTAS - 2 pages of text & photos. Photos - Loading Harvard NZ1060 into RAAF C-130 for RAAF Museum at Point Cook; two RNZAF Skyhawks & one RAAF Skyhawk; RNZAF "Leftover" Andover in camouflage; RAAF F-111C; RNZAF Andover; RNZAF, RAAF & RCAF C-130's; RNZAF & RAAF Orions at Wharapui Op Bullseye; two RNZAF Strikemasters; USMA VC-118B 128433 at Wharapui; NZ Army Sioux on floats 3 Sqn.; two NZ Dakotas; NZ VIP Andover NZ7628.

Compiled by John Corsair (SAFCH #30)

# abstracts-abstracts-abstracts-abstracts-abstracts-abstracts-abstracts-abstracts-abstracts

Abstracts mm = modell magazin MF = Modell Fan

Czechoslovakia: Four photos of S-199s and three photos of CS-199s; no visible markings. MF October 1977.

Hungary: Photo of airport Innsbruck after the German capitulation shows German Hs 126, Si 204D and a Hungarian Ar 96B, s/n G9+27 with whole fin and rudder horizontally divided with the Hungarian colours red/white/green. MF January 1977.

Norway: As part of a trading agreement, Norway received four CA 310 for payment for cosfish deliveries. Flown with the original Italian finish of dark green over yellow ochre the Ca 310 got serials 501, 503, 505, and 507. At the time of the German invasion, three Ca 310 escaped from the airport at Stavanger/Sola but one crashed shortly after takeoff and was captured by German forces. Both remaining a/c were later forced to make emergency landings. The fourth Ca 310 was captured undamaged at Stavanger. mm May 1977. Photo of Norwegian Ca 310 at Christiansand, mm March 1977. Photo of CA 310 with Norwegian markings and serial '507' at Stavanger on 18 May 1940. mm June 1977.

Sweden: First Fi 156 of the Swedish order was c/n 631 which finished its flight evaluation in June 1938. mm March 1977.

Compiled by Paul Bezouska (SAFCH #34)

(Key: a = small article, often only a few lines; A = medium to large article; p = one or more photos.)

## AIR PICTORIAL 1978

**January:** F-15 in Holland (a). Overseas sales of Mirage's (a). French AF Alpha Jet (p). French Navy Super Etendard (p). Mirage F1B for unknown Arab AF (p). Aerospace Fougas 90 mock-up (p). SA330 Puma for Indonesian AF (a). SAAB JA-37 first production a/c flies (a). Iranian AF AWACS (a). Turkish AF Aermacchi MB339 (a). Canadian AF testing F-14 (a). Indonesian F-5Es (a). Fokker offer F27 Maritime to French Navy (a). French Navy refurbishing Alizes (a). RNZAF Dakota and HS Andover C1 (p). Brazilian Navy Wasp (A&p). Occupation of Madagascar 1942 (A with photos of French AF MS 406, Potez 25TOE, Potez 29, SAAF Martin Maryland, Ju-52/3m, Lockheed Lodestar). BN Defender for Botswana (p). Peruvian AF An-26 (p).

**February:** Finnish AF orders HS Hawks (a). Holland orders more Lynx (a). Nord 262 Maritime version and Super Mirage mockups (p). Bulldog for Royal Hong Kong Auxiliary AF (p). Maritime Friendship for Spain (a). Canadian AF to get Lockheed Orions (a). Japan to buy F-15 (a). Argentine Navy to get S2E (a). RNZAF Bristol Freighters and Dakotas (p). Spanish transport at Getafe (A with photos of C-130, C-54, CASA Azor, CASA Aviocar, CV 440, NA T-6, Do-27, Piper Aztec E, Beech Baron). Occupation of Madagascar 1942 - Part 2 (A with photos of SAAF Beauforts, Italian AF SM-85 and SM-86). **March:** Finnish AF J-35 (colour photo). Swiss F-5E (p). Canadian AF evaluates Torado (a). Spanish AF Mirage F1 (a). Iranian AF Friendships modified (a). Bolivian AF T-33 (a). Egypt interested in F-5E (a). North Korean MiG-15 (A&p). Finnish Air Force (A with photos of SAAB J-35, MiG-21, Valmet Vinka, C-47, Mi-4, Il-28, Cessna 402B, Magister, Mi-8, SAAB Safir, Hughes 500C, MiG-15UTI. Occupation of Madagascar 1942 - Part 3 (A with photos of SAAF Beaufort, French Potez 63-11, Potez 25TOE, MS 406).

**April:** French AF Jaguar trainer (colour photo). Egyptain Lynx (a). Mirage 2000 (p). Middle East fighter deal (a). Sudan AF C-130 new camouflage scheme (p). Spanish AF Fokker F-27 Maritime Friendship (p). RAAF P-3C (p). Greece to get A-7 Corsair trainer (a). Ethiopian Helicopters (a). Lebanese Hunters (a). Portuguese T-38 (a). Uruguayan AF Embraer EMB-110B1 Bandeirante (a). Canadian AF evaluate F-16 (a). Chinese Nat. to replace F-104 (a). French Air Force 1978 (A with photos of Jaguar, Vantour, Mirage F1C, Transall C-160, Mirage F1, Alouette III, Mirage IIIR, Mirage IVA, Boeing C-135, Mirage IIIE, Mirage 5F, Puma, DC-8F, DC-6, CAP 10, Jodel D140, MS.880-180GT Rallye, Dassault MD-315 Flamant, Nord 262D, Alouette II, Dassault Mystere XX, Fougas

Magister, MS 760 Paris, Mystere IVA, Mirage IIIBE, Nord 2501 Naratlas, MH 1521, Cessna 411, Caravelle, T-33A. **May:** Spanish AS Phantoms (colour photo). Hawks for Indonesia (a). Swiss AF F-5E (p). Mirage 2000 (p). Sudan AF C-130 (a). T-34C foreign orders (A&p). Argentine AF Vertol CH-47 (a). Mauritanian Islamic AF interest in FMA IA-58 (a). RAAF A.E.W. (a). Moroccan AF Alpha Jet (a). Sudan AF to get F-5E (a). F-5E to Mexico and Guatemala ? (a). MiG-27 to Iron Curtain Allies (a). MiG-15 captured in Korea (A&p). Phantom Aide (A with photos of Luftwaffe F-4F & RF-4E, Japanese F-4EJ & F-4E, Israeli F-4C, Spanish & Greek F-4E, Iranian F-4D, R.O.K. F-4D, RAAF F-4E, Turkish F-4E).

## AIRCRAFT ILLUSTRATED 1978

**January:** Belgium AF Sea King (colour photo). Italian AF RF-104G (A&p). Brazilian Navy Wasp (A&p). BN Islander (A with photos of Botswana Islander). SAAF Display (photos of Mirage IIICZ, Impala, Super Frelon, Kudu, Transall, P-1665, Spitfire IX, Buccaneer, Fairchild Argus). Preserved Ju 88R1 and Mitsubishi Ki-46 (p). Peruvian An 26 (p). French Navy DC-6 (p). Danish SAAB J-35 (p) & AJ-37 (colour and b&w). **February:** Luftwaffe Transall (p). Pumas for Indonesia (a). French AF Mirage IIIC, T-28, T-6G (p). Finnish AF DC-3 (colour photo). Belgium AF C-130 (p). Italian AF RF-104G (p). **March:** Finland orders Hawk (a). Dutch Lynx reorder (a). Spanish F-27 Maritime (a). Royal Iraq Venom (p). Italian AF Vampire (p). Arab Legion Viking (p). Italian AF Lodestar (p). **May:** Luftwaffe F-104G (colour photo). RNorAF F-5A (p). Lynx for Egypt (a). Peoples Rep. of China DHC-6 (a). Restored Swiss D-26 (colour photo). NATO Exercise Artic Express (A with photos of German Army UH-1D, RNorAF F-5A, Canadian AF UH-1N & CF-5A with recce nose).

## AIRFIX MAGAZINE 1978

**January:** German Phantoms (A with photos & drawings). **February:** West German Army Alouette II (p). **March:** NATO Exercise Avon Express (A with photos of Italian AF C-130 & RF-104G, Belgium Army Alouette II) Netherlands Naval Air Service 60 Years (a with photos of Atlantic, Ryan STM, Fokker T-IV, Neptune). Royal Australian Navy S2E & A-4G (p). Preserved Bf-109G (p). BAC Lightning trainers of R. Saudi AF. **April:** Nothing relating to Small Air Forces. **May:** Dutch Navy Lynx (p).

## SCALE MODELS 1978

**January:** Douglas A-20 Boston (A&p with 1/72-scale plans). Omani Jaguar (A&p with colour plans and photo). **February:** DH 60 Gipsy Moth (drawings and plans). Douglas A-20 Boston - Part 2 (A&p with colour drawings including RAAF A-20G). **March:** Percival Proctor (A&p with drawings/plans including RAAF a/c). **April:** Nothing directly relating to Small Air Forces. **May:** Focke Wulf 190 (A&p with 1/72-scale plans and colour drawings - first of a 3 part series). Beech Staggerwing (A&p with plans). **June:** Focke Wulf Fighters - Part 2.

Compiled by Charles Vetheridge (SAFCH #283)

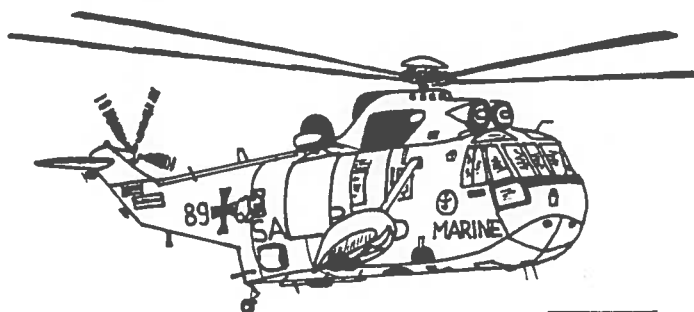
## KONTAKT

#30 Feb 77 (24 pages). "J 20 - Re 2000" (13 pages, 8 photos, 2 pages of scale drawings). Photos: Fokker F VII SE-ACF, Firefly SE-BYB.

#34 Dec 77 (24 pages). "J 9 - Seversky EP 106" (17 pages, 16 photos, 2 pages of scale drawings, 7 side views). Photos: Cierva C.30 SE-AFI.



# WESTLAND



helicopters for the world



Yeovil, Somerset, England is the home of a company who export throughout the world. To date Westland have made over 2000 helicopters since helicopter production began in July 1949. For the Small Airforce researcher, this company's production is at first sight a delight.

I hope with your help to produce a definitive description of every export Westland. WHY don't I ask Westland I hear you ask? Well they can help, BUT you must remember that the majority of their information is of delivery schemes, and that is not always the 'copters working colours.

Westland usage (that is, including second sales) looks something like this:

**DRAGONFLY:** Italy, Japan, Thailand, France, Ceylon, Iraq, Egypt, Yugoslavia.  
**WIDGEON:** Cuba, Brazil, Hong Kong, Japan.  
**WHIRLWIND:** Austria, Cuba, Ghana, Brazil, Algeria, Denmark, France, Saudi Arabia, Spain, Brunei, Nigeria, Qatar, Kuwait, Yugoslavia, Jordan.  
**WESSEX:** Australia, Ghana, Brunei, Iraq, Bangladesh, (Sultanate of Oman - loan).  
**SCOUT:** Jordan, Australia, Uganda, Bahrain.

**WASP:** South Africa, Holland, New Zealand, Brazil.  
**SIOUX:** Yemen.  
**GAZELLE:** Qatar.  
**SEA KING:** Egypt, W. Germany, Norway, Australia, Belgium, India, Pakistan.  
**COMMANDO:** Egypt, Qatar.  
**LYNX:** Egypt, Holland, France, Brazil, Argentine, Denmark.

Note: Westland manufacture sub-assemblies for the PUMA but the only complete aircraft are for RAF use. See later notes on project.

The SAFCH group here plans to present our project as follows:

- (1) Sea King / Commando
- (2) Lynx, Wasp, Scout, Gazelle, Sioux
- (3) Wessex
- (4) Whirlwind
- (5) Widgeon / Dragonfly

Part (2) is well under way, but parts (3) & (4) need your support. We wrote to some members direct, but if any of you can help, don't wait for us, please write, we will reply to every letter and give acknowledgements where due.

## Westland SEAKING

Westland took the Sikorsky S-61 and produced an advanced helicopter intended for anti-submarine warfare (ASW) and search & rescue (SAR). Able to operate in all weather, day and night, the Sea King can also be used for casualty evacuation, tactical troop transport, logistic support and for vertical replenishment.

Equipment includes tactical radar, medium range sonar and an automatic flight control system as well as comprehensive navigation and radio equipment.

The automatic flight control system stabilises the helicopter, enabling it to maintain a selected transit flight path, providing automatic transition and hover facilities.

### PERFORMANCE

The Sea King now incorporates 2 x RR Gnome H 1400-I gas turbine engines of 1660 shp, uprated transmission and a six blade rotor to give improved hot and high performance.

### ASW

The ASW Sea King is a totally self-contained tactical system able to detect, classify and destroy high-speed submarines in all weather operations. The tactical system is the combination of sonar, radar, doppler, and

the automatic flight control system. In this mode the Sea King can operate from ships or shore bases. To ease handling on ships the helicopter is fitted with an automatic main rotor blade folding system and a manual tail fold system.

The ASW Sea King carries a crew of 4; 2 pilots, an ASW control officer or observer, and a sonar operator. With an operating cycle of 50/50 hover/cruise and carrying full ASW equipment with 4 Mk 44 torpedoes, the Sea King has an on station endurance of over 4 hours.

### SAR

Westland developed the SAR version to meet a worldwide demand for an effective long-range helicopter capable of operating in all weathers. The cabin can be fitted with seats and/or stretchers and can accommodate up to 18 people. If the search radar display equipment is removed, seating increases to 22.

### OTHER ROLES

A development program has enabled the Sea King to operate on air-to-surface strike missions using Exocet missiles. The interior of the helicopter can be transformed from SAR to VIP roles using kits that enable the change to be completed within a few hours.

#### WESTLAND SEA KING Mk 41 SAR

In May 1969 the BUNDESMARINE ordered 22 Sea Kings as a replacement for the Albatross and CH-34G operated by Marinefliegergeschwader 5 based at Kiel-Holtenau. The first was completed in Feb. '72 and first flew 6.3.72. The first arrived at Kiel 20.3.74, being deployed along the North Sea coastline of West Germany.

Serials are: 89 + 50 to 89 + 61 inclusive  
89 + 61 to 89 + 71 inclusive

The first 89 + 61 crashed 16.1.74 before official acceptance and was replaced by another helicopter marked 89 + 61. The MFG5 now possesses two of 89 + 61 since the first was partially stripped for spares and is now on the base at Sylt minus main rotor and engine.

#### WESTLAND SEA KING Mk 42 ASW

I have little information on Indian Navy use other than the serials - IN501 to IN512.

#### WESTLAND SEA KING Mk 43 SAR

The Royal Norwegian Air Force bought 10 Sea Kings which were built during 1972. The specification called for deletion of sonar gear, radar repositioned, and, most important, an extra fuel tank giving endurance of up to 6 hours is positioned in the rear section. The thermal barrier was repositioned by about 1.5 m, giving increased capacity. To meet the severe demands of operating within the Arctic Circle, extra provision has been made for cabin heating, plus the fitting of their most distinguishing feature, the deflector shields fitted over the front of the intakes.

The Sea Kings are operated by 330 Squadron (Motto: Trygg Havet - "Safeguard the Ocean"). The HQ is at Bodo, 'B' Flight operates from Banak, 'C' Flight from Orland, and 'D' Flight from Sola.

Serials are: 060, 062, 066, 068, 070-074.

#### WESTLAND SEA KING Mk 45 ASW

The Pakistan Navy operates Sea Kings serialised 4510-4515, armed with Exocet missiles. I am told that the serials have changed but to date have no hard data.

#### WESTLAND SEA KING Mk 47 ASW

Ordered by Saudi Arabia for Egypt, these aircraft are c/n WA822 to 827 and appear to carry this as their code. Colour pictures of these aircraft show them to be a very rich blue - very attractive.

#### WESTLAND SEA KING Mk 48 SAR

Based at Koksijde the Belgium Air Force operates five Sea Kings serialised RS01 to RS05. The operators are 40 Heli Smaldeel (Motto: Aude Audena - "Dare the Things that Need to be Dared").

Note that the demarkation line between the light stone and olive green is not sharp and that there are variations between individual aircraft.

#### WESTLAND SEA KING Mk 50 ASW

The Royal Australian Navy ordered Sea Kings, the first of which flew on 30.6.74. They are operated by 817 Squadron who operate from HMAS MELBOURNE. Their serials run from 801 to 810 and the aircraft carry this together with type and code as follows:

01	16-098	06	16-117
02	16-100	07	16-118
03	16-112	08	16-119 Crashed 9.77
04	16-113	09	16-124
05	16-114	10	16-125

The drawing shows the aircraft at Greenham Common in 1977. I have colour photos which unfortunately show the Sea King covered in decals so the two small badges are shown minus colour detail. IMPORTANT: The colour is light aircraft grey, NOT blue grey as some references describe.

## Westland COMMANDO

#### WESTLAND COMMANDO Mk 1

The Commando differs from the Sea King in several ways, stub wings, fixed undercarriage and additional windows. By using the armament 'shoes' on the stub wings the commando can carry various launchers, guns, missiles and rocket pods BUT I have no evidence that any have been so equipped.

The Mk 1 is shown in Egyptian service using its c/n WA 782-786. These were followed by uprated Mk 2 c/n WA 803, 4, 6, 808-821. The newscasts of the Sadat/Begin talks showed these aircraft with filters fitted.

#### MODELLING THE WESTLAND SEA KING

Modellers are fortunate in having a splendid 1/72-scale model to work on, i.e., the AIRFIX Sea King.

Stages: Select interior for subject chosen, fit windows.

Assemble.

Mark out and fit thimble (see below).

Alter engine intakes to a flatter oval.

Check shape of sponsons, fit winch.

Finish.

If you want to put the Sea King in your collection, I suggest that you get the following:

AIRFIX Sea King	£ 0.68
RAYHEX conversion	
(Thimble and SAR windows)	0.40
MODELDECAL Sheet 19	
(German Sea King decals)	0.50

Anyone having difficulties acquiring these items, especially the RAYHEX parts, I offer to help any SAFCH member, i.e., for basic exchange in kind or even just aircraft photos .... don't hesitate to write.

Wyn Edwards, Denecot, Toadsmoor, Brimscombe, Stroud,  
GL5 2UL, ENGLAND.

#### WESTLAND COMMANDO Mk 2 VIP

Two helicopters WA805 and 807 have been specially fitted out as VIP aircraft for use by the President of Egypt. Provision exists for the fitting of filters.

#### WESTLAND COMMANDO Mk 2

Qatar operates 3 Commandos QA20 to 22 (Mk 2) and one Mk 2c whose serial has eluded me so far. These aircraft have very sharp colour demarcation and are very high gloss. I'm afraid that I have still to come across a picture of the right hand side.

As you see from this submission, we have finally got a project into the SAFO. From the lessons we have learned and continue to learn, we feel that it would be a good idea to put our experiences down on paper in the hopes that it will help others to get that IDEA of yours into print.

(i) SELECT A SUBJECT: Your problem, BUT remember that while you may think ordinary, it may be new to the rest of the membership. At first, we could not get started on this article because we wanted to be original, but then we realized that much of what we took for granted would be new to many others.

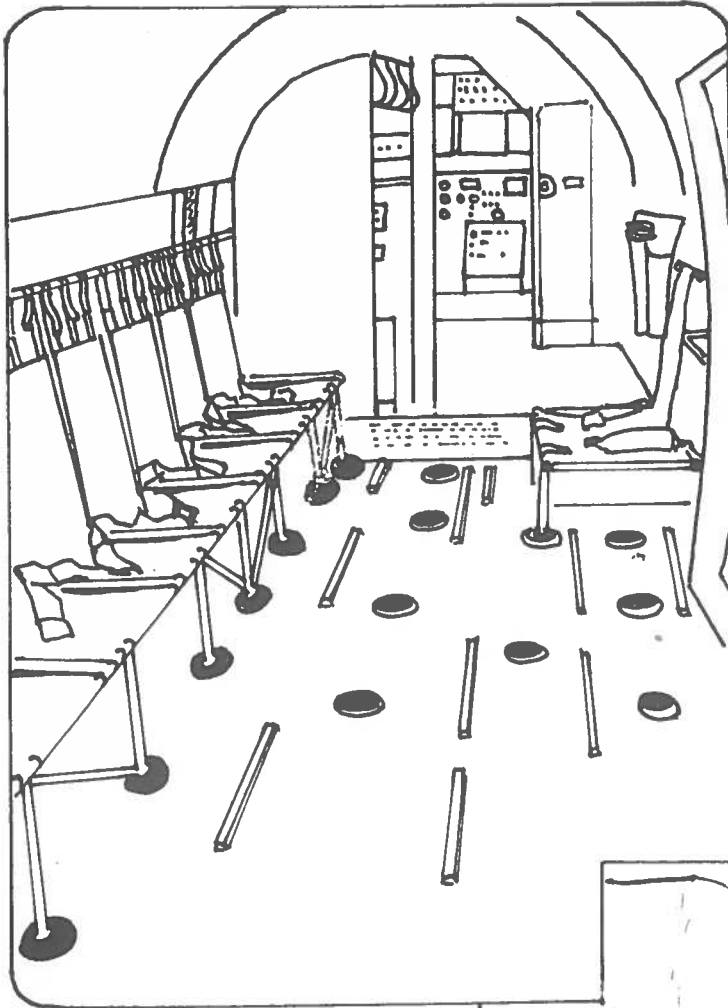
(ii) ORGANIZE YOURSELF: Do this so that when you come across information you can note it easily and accurately. Tracing from a photo or using published drawings enables you to record photos easily. Watch some of the published drawings, they usually need some correction.

(iii) SEARCH: Use as many sources as possible. One of your problems will be seeing the same photo repeated. Remember that camouflage patterns need two sides.

(iv) USE SAFO: Writing to members works. I have not met with a refusal so far. I regard this type of contact as being what the SAFCH is all about; it allows all members to contribute.

Continued on page 59

## INTERIOR-SAR



### COLOURS. -

FLOOR - TO STEP - BRIGHT GREEN

DISCS - BLACK PLASTIC

STRIPS - BRIGHT ORANGE

FLOOR - ABOVE STEP - GREY.

SEATS - FRAME - PALE BLUE

- CLOTH - MEDIUM BLUE

- BELTS - MEDIUM BLUE

- STRAPS - LT GREY

WALL - ABOVE SEATS - WHITE

CEILING - LT. CREAM BROWN

SCREEN - CHOCOLATE

FLARE BAG - BRIGHT YELLOW

### THE VIEW BEHIND THE SCREEN

WALL PADDING - OFF WHITE

TOP PANEL - LT GREY

RH DIALS - BLACK (DECCA NAVIGATOR MK1)

UPPER CENTRE - BLACK ON WHITE FIELD

LOWER CENTRE - BLACK

LH UPPER - BLACK & WHITE KNOBS

LH LOWER - BLACK (HARCON ADDRESS NAV)

MIDDLE PANEL - WHITE - BLACK KNOBS.

LOWER PANEL (SEARCH RADAR DISPLAY)

COPPER DISC ON BLUE GREY BACK-

GROUND - BLACK FRAME

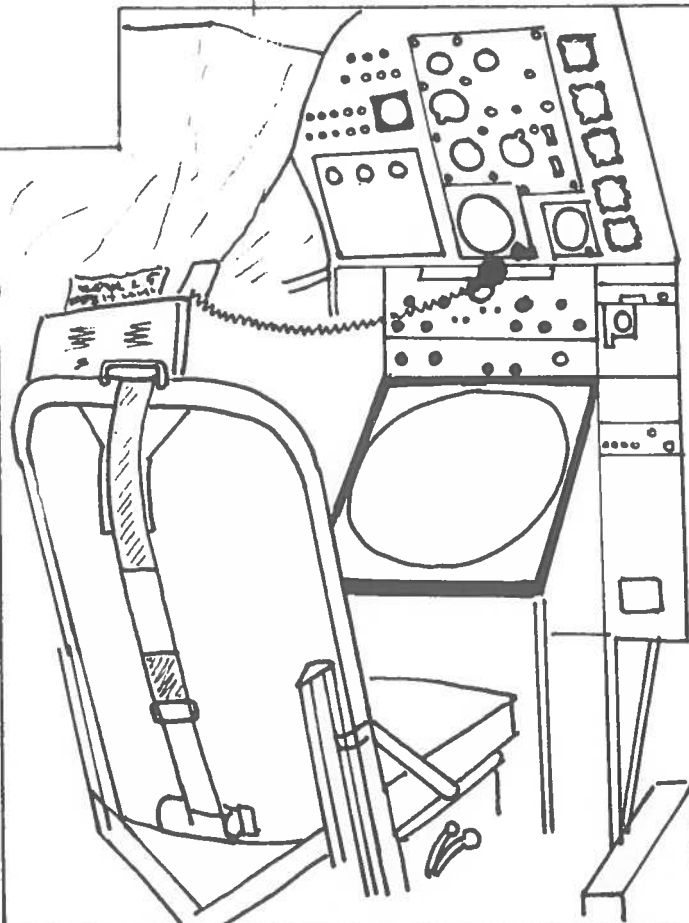
RH PANEL - BLACK PANELS ON GREY.

SEAT -

FRAME & BACK - LT. GREY

STRAP - CREAM & WHITE

SEAT CUSHION - RED



TOP PANEL

3-D

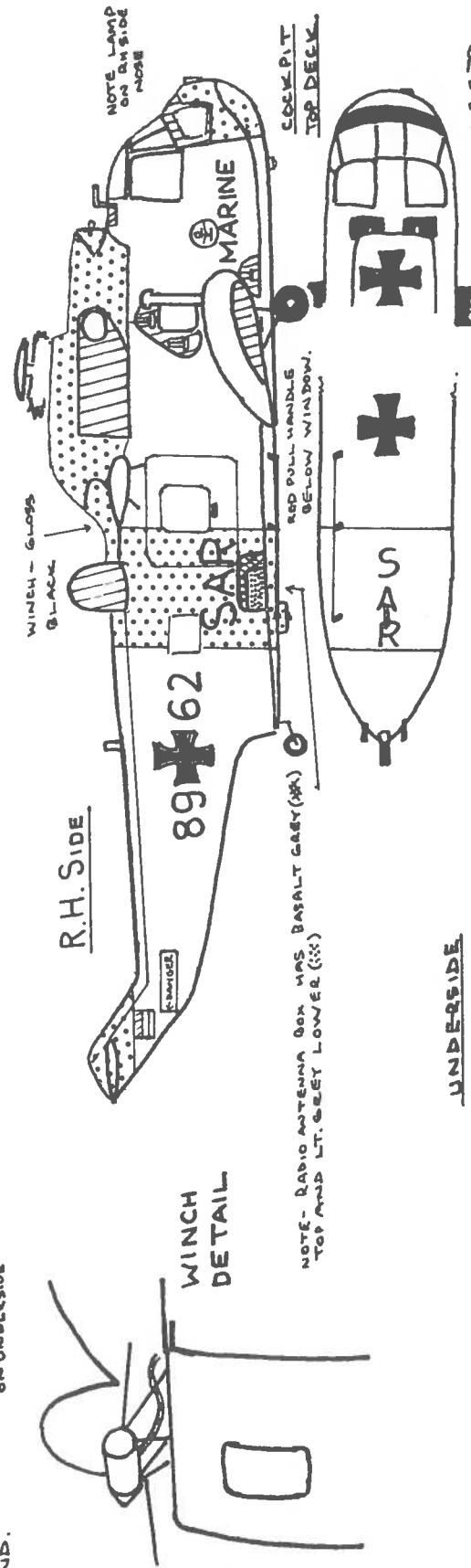
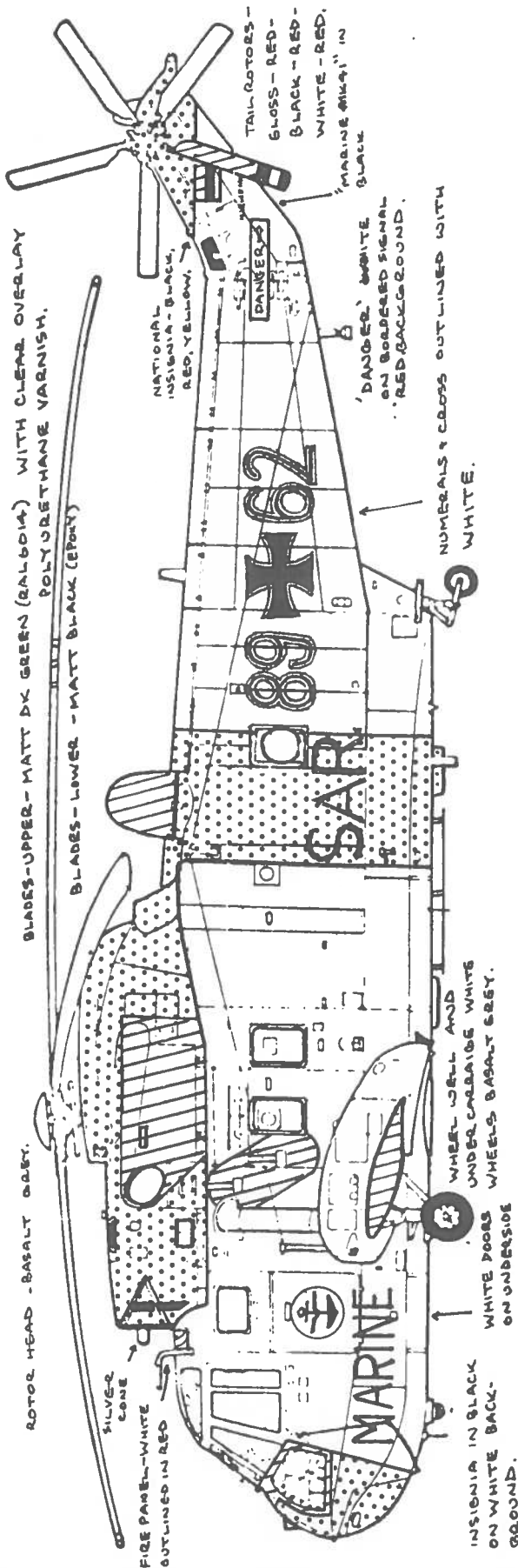
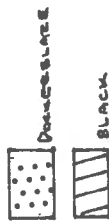
LOWER

W. 3.78.

# WESTLAND SEA KING MK41-SAR

BASIC COLOURS -  
 BASALT GREY - RAL7012 ENAMEL  
 DOCKERBLAZE EXTERIOR ORANGE TMR26-SM474  
 LETTERS & NUMERALS - BLACK RAL9005  
 "SAR" IN LIGHT BLUE - RAL 50012  
 INTERIOR - SEMI-GLOSS GREY

WEST GERMAN BUNDESMARINE  
 MARINEFLIEGERGESCHWADER 5 (MFG5)  
 BASED AT KIEL-HOLTENAU.

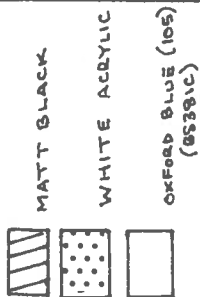
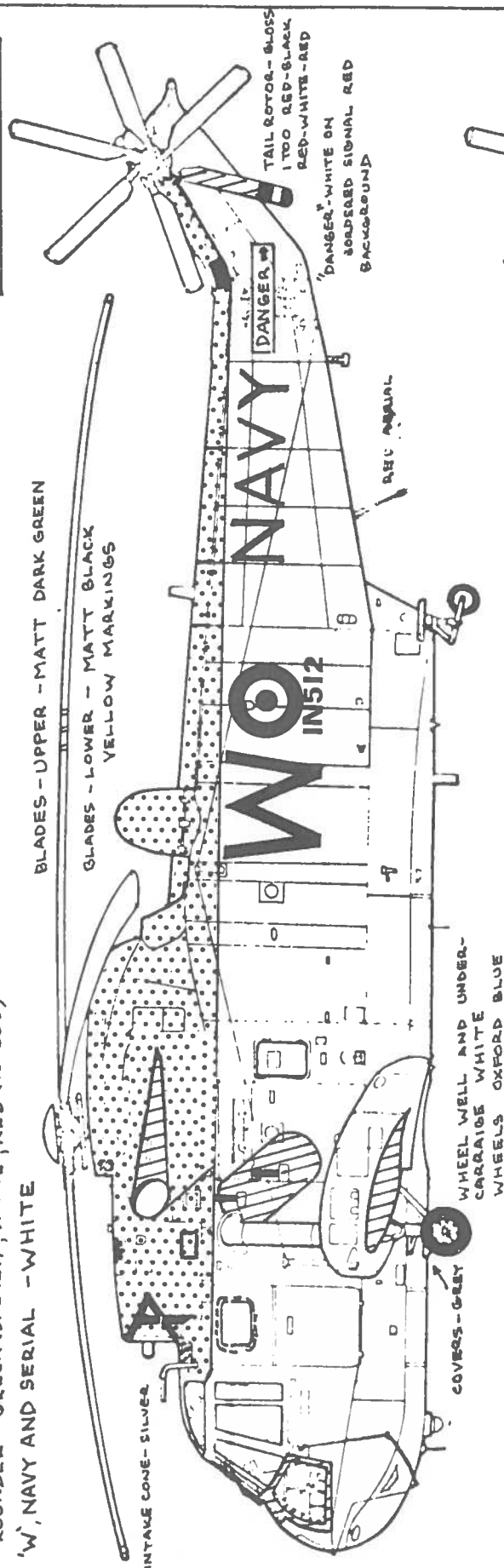


WGE.3.7B

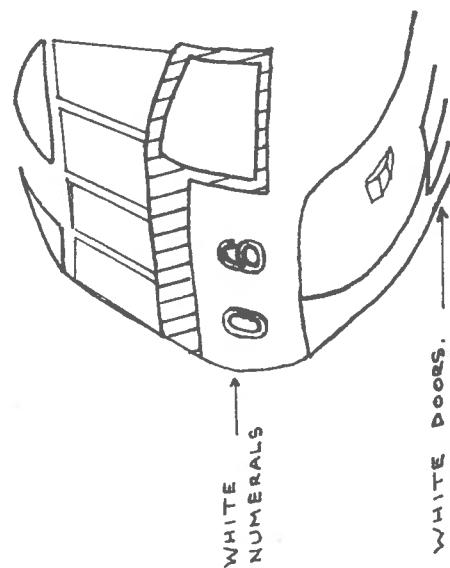
# WESTLAND SEA KING MK42 ASW

## INDIAN NAVY

BASIC COLOURS- ACRYLIC WHITE AND OXFORD BLUE  
 INTERIOR - GLOSS GREY N°632 EPOXY  
 ROUND - GREEN (SF6427), WHITE, RED (N°538)  
 'W', NAVY AND SERIAL - WHITE

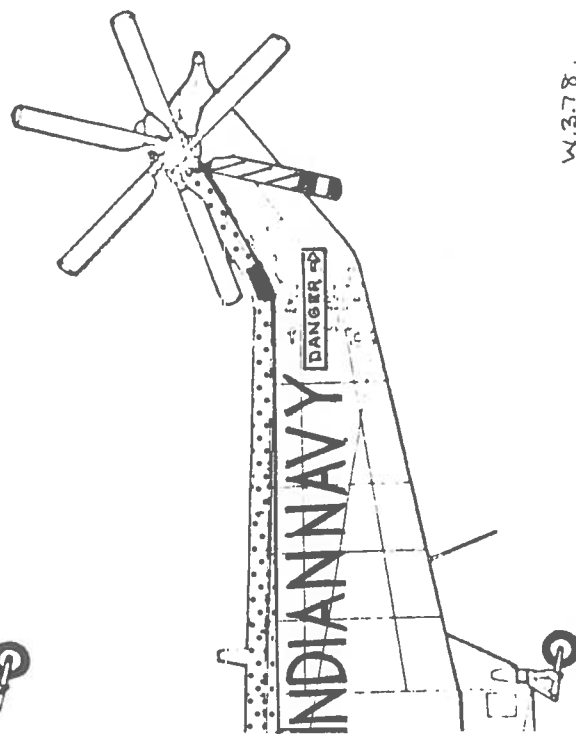


**ERROR - SHOULD BE 5 BLADE ROTOR**



## EARLY MARKINGS

SEEN ON IN501-6



W.3.78.

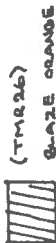
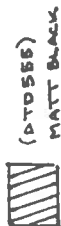


# WESTLAND SEA KING MK43 SAR

## ROYAL NORWEGIAN A.F. 330 SQUADRON

BASIC COLOUR - WHITE GLOSS (FET4 DTD 5550)  
WITH BLAZE ORANGE  
LETTERING & NUMERALS - GLOSS BLACK

INTERIOR - SEMI GLOSS GREY (N0632 DTD 5555)  
COCKPIT WINDOW FRAMES ARE  
ORANGE.



NOTE - ROTOR STUDS  
IS WHITE

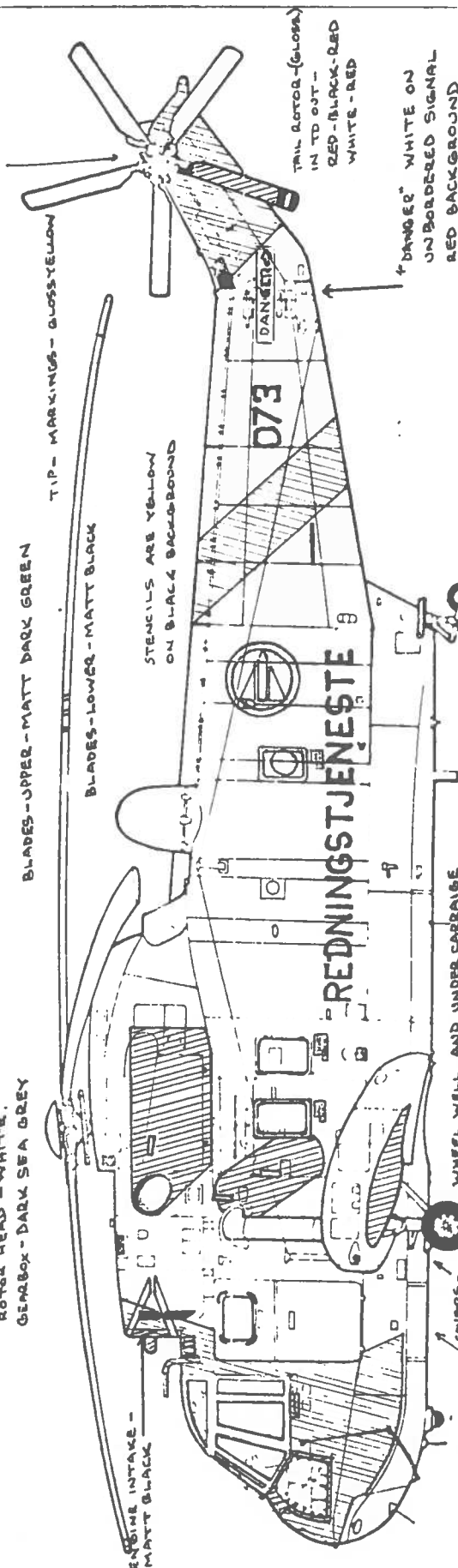
ROTOR HEAD - WHITE.  
GEARBOX - DARK SEA GREY

BLADES - UPPER - MATT DARK GREEN

BLADES - LOWER - MATT BLACK

STENCILS ARE YELLOW  
ON BLACK BACKGROUND

TIP - MARKINGS - GLOSS YELLOW



USE OF FLOAT -  
MATT BLACK

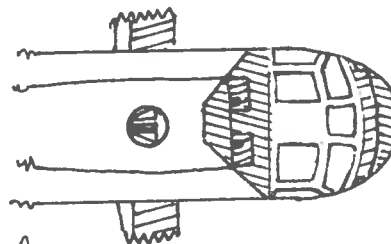
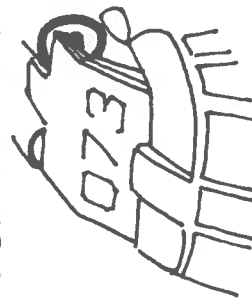
WHEEL WELL AND UNDERCARRIAGE  
WHITE (DTD 5555)

NOTE - RADIO ANTENNA  
BOX AS ON MK41  
BUT BLACK TOP AND  
WHITE LOWER.

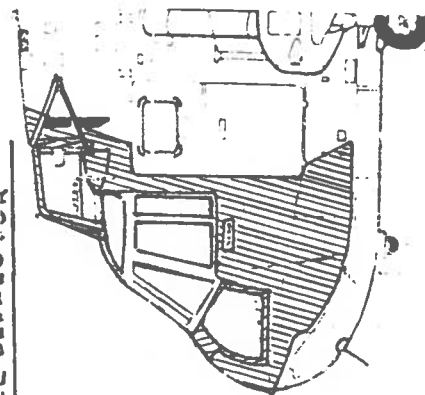
R.H. SIDE - SHOWING  
FULL CHEVRON >

SIDE VIEW SHOWING  
ICE DEFLECTOR

ICE DEFLECTOR SHIELD  
ORANGE WITH WHITE TAIL  
AND BLACK NUMERALS



TOP VIEW



5278.

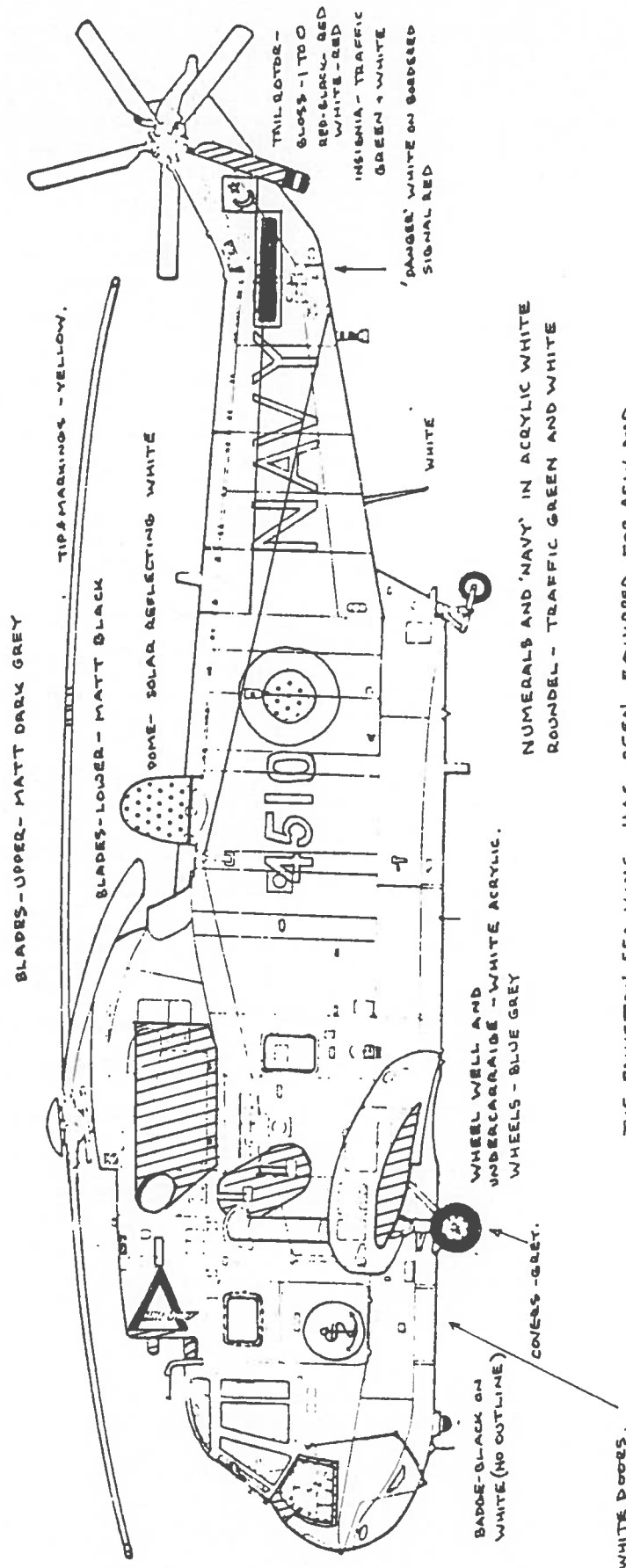
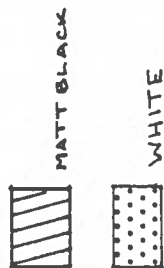
# PAKISTAN NAVY

## WESTLAND SEA KING MK45 AGW

BASIC COLOURS - RAF BLUE GREY (N°633 B5281C)

ACRYLIC OVERALL

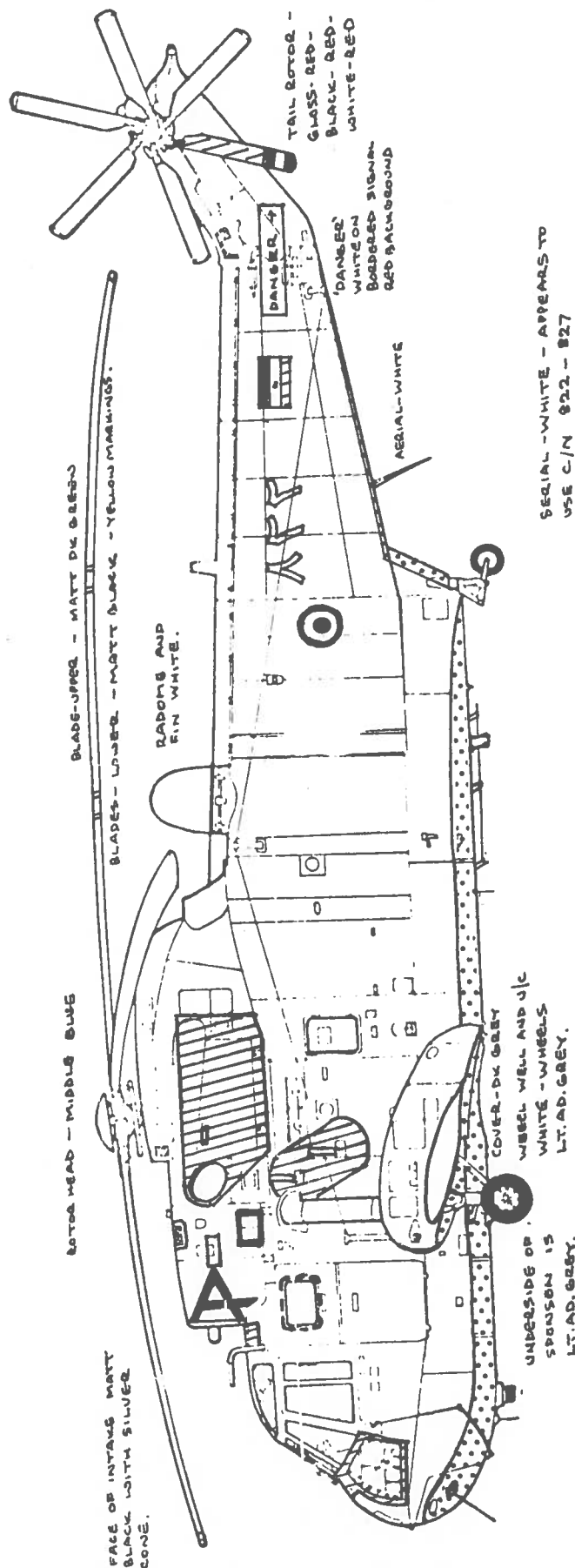
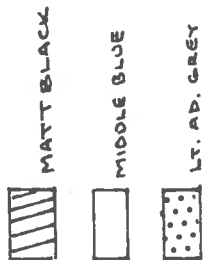
INTERIOR - SEMI GLOSS GREY (N°632) EPOXY



THE PAKISTAN SEA KING HAS BEEN EQUIPPED FOR ASW AND ASV, BY THE FITTING OF EXOCET MISSILES FOR AIR TO SURFACE STRIKE

WESTLAND SEA KING MK47 ASW

MAIN COLOURS- MIDDLE BLUE (BS381C N0109) GLOSS  
- LT. ADMIRALTY GREY (N0697) GLOSS



# WESTLAND SEA KING MK 49 SAR

BASIC COLOURS - BLAZE ORANGE - GLOSS  
 LIGHT STONE - GLOSS  
 OLIVE GREEN - GLOSS

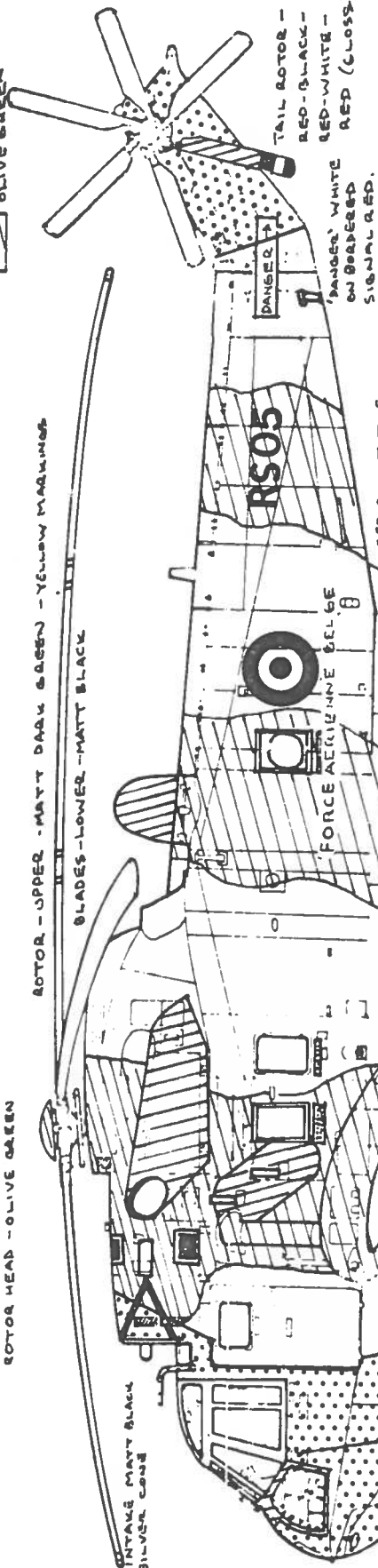
# BELGIAN AIR FORCE

40 SMALDEEL

BLACK (MATT)  
 SLAZE ORANGE  
 LT STONE  
 OLIVE GREEN

ROTOR HEAD - OLIVE GREEN

ROTOR - UPPER - MATT DARK GREEN - YELLOW MARKINGS  
 BLADES - LOWER - MATT BLACK



TAIL ROTOR -  
 RED - BLACK -  
 RED - WHITE -  
 RED (GLOSS)  
 ON BORDERED  
 SIGNAL RED.

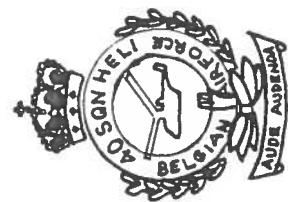
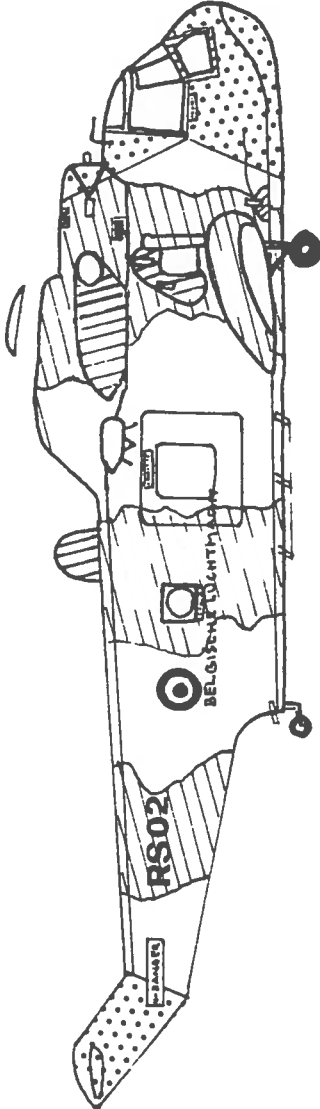
SERIAL & TITLE  
 ARE WHITE

GRAY COVERS

STENCILS - YELLOW  
 ON BLACK.

WHEEL WELL AND  
 UNDER CARRIAGE WHITE

INTAKE MATT BLACK  
 SILVER CONE



INSIGNIA - A WHITE SEA KING  
 HELICOPTER IN A BLUE DISC OVER  
 A RED HAND SURROUNDED BY A  
 WHITE CIRCLE WITH BLACK  
 LETTERING, GOLD CROWN AND  
 LEAVES.

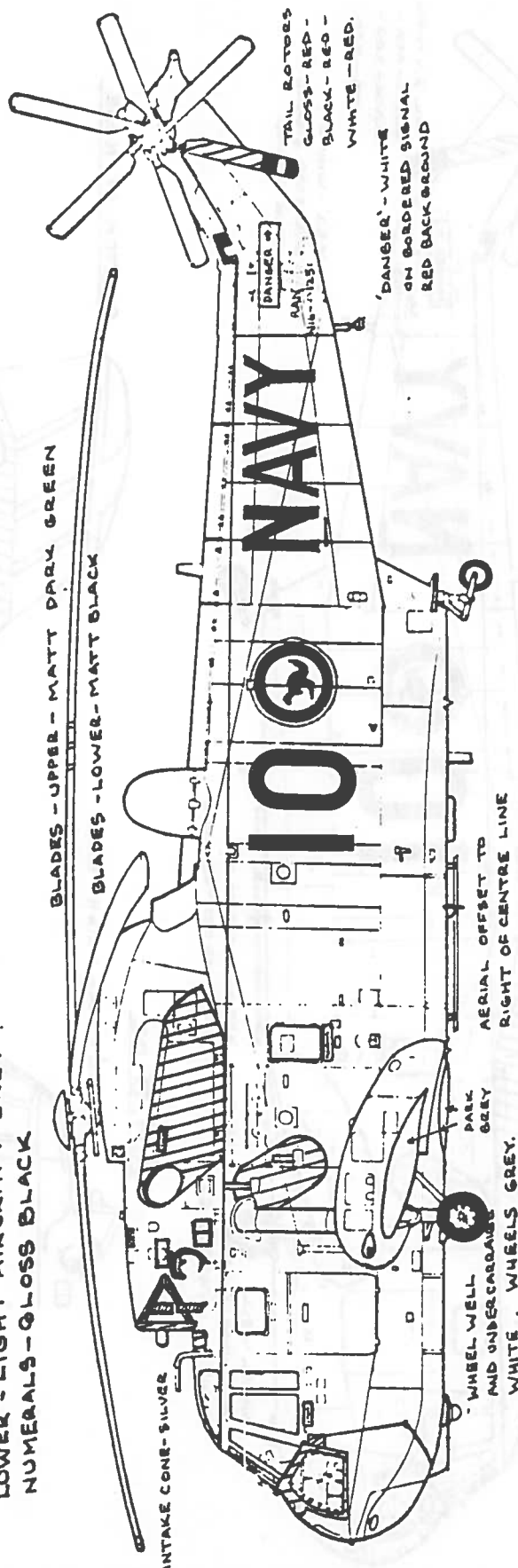
WGE 3.7B

# WESTLAND SEA KING MK50 ASW

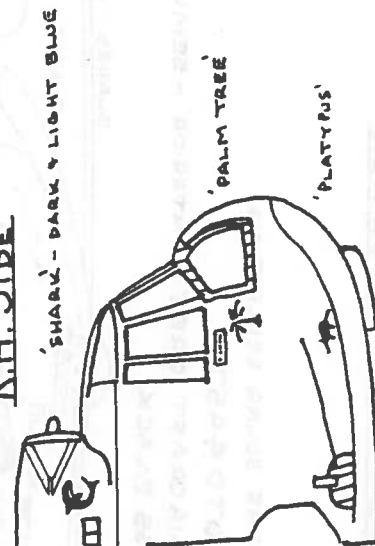
BASIC COLOUR -  
UPPER - POLYURETHANE SOLAR REFLECTING  
WHITE (DTD4957A)  
LOWER - LIGHT AIRCRAFT GREY . INTERIOR - SEMI GLOSS GREY (DARK)  
NUMERALS - GLOSS BLACK

# ROYAL AUSTRALIAN NAVY

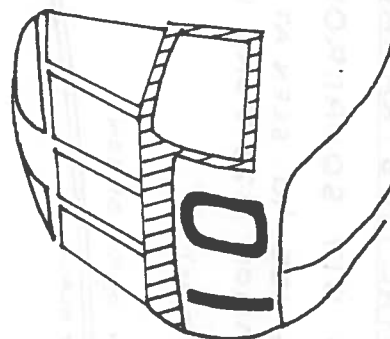
NO 817 SQUADRON  
N16-125 '10' SEEN AT GREENHAM  
COMMON - 25 JUNE 1977



## R.H. SIDE



## SKETCH OF NOSE



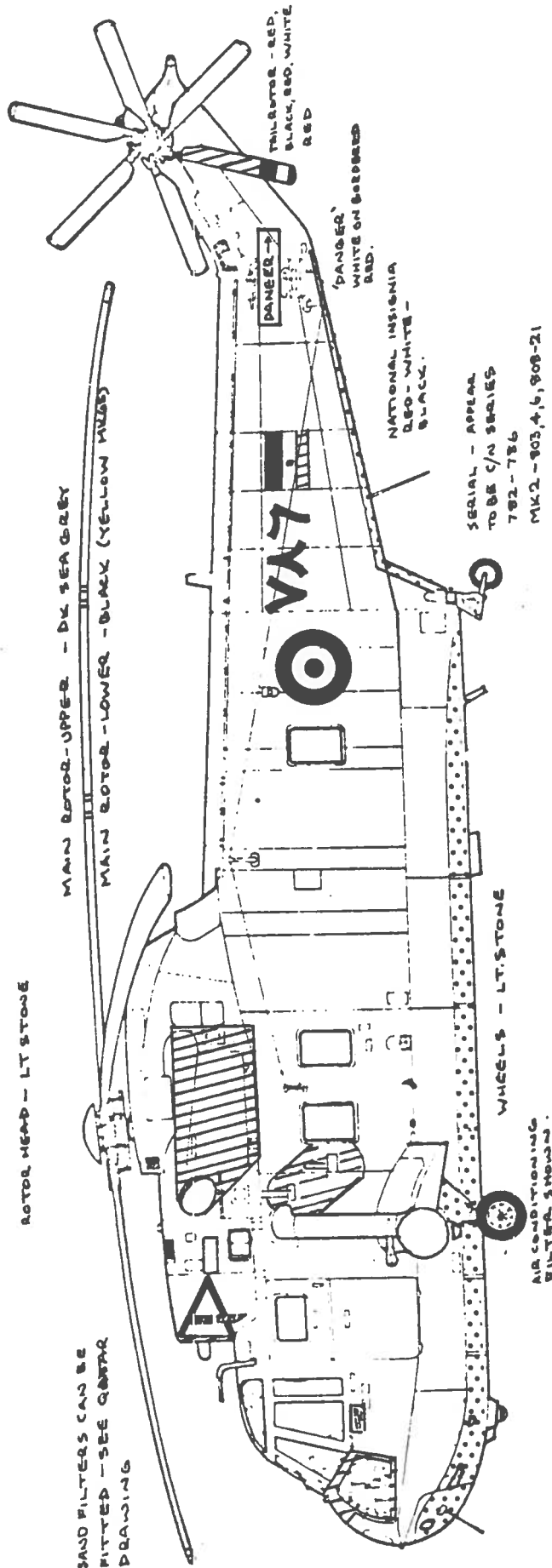
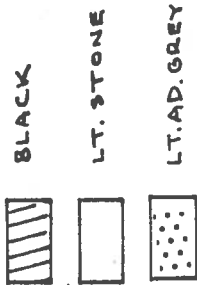
W.3.78.



# WESTLAND COMMANDO MK 1

## ARAB REPUBLIC OF EGYPT

BASIC COLOURS - LT. STONE (85381C N°361) MATT EPOXY  
 - LT. ADMIRALTY GREY (N°697) MATT EPOXY  
 NOTE - ALL EXTERNAL COLOURS ARE MATT  
 - INTERIOR - SEMI-GLOSS GREY



THE COMMANDOS SOLD TO EGYPT ARE NOT ARMED  
 BUT VARIOUS LAUNCHERS, GUNS, MISSILES  
 AND ROCKET PODS COULD BE FITTED - MUCH OF  
 THIS ON "SHOES" ATTACHED TO THE SPONSON

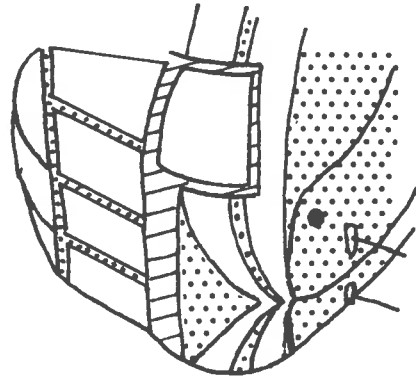
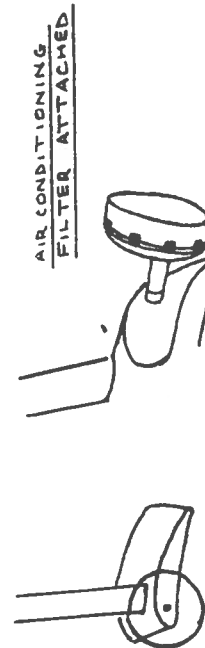
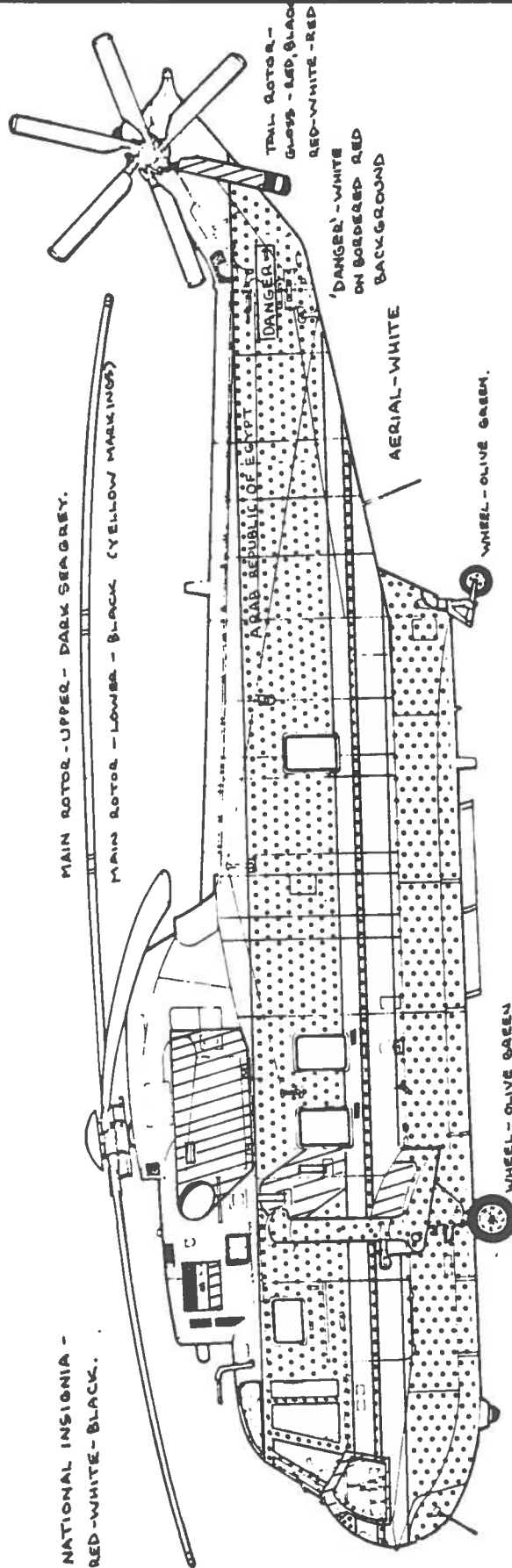
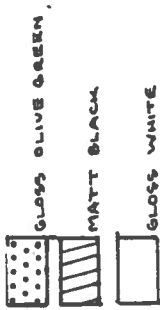
157307V19  
 1234567890

W.3.78

# WESTLAND COMMANDO MK2B (V.I.P)

## ARAB REPUBLIC OF EGYPT.

BASIC COLOURS - GLOSS OLIVE GREEN AND WHITE  
 LETTERING - GLOSS WHITE.



U 2.78.

# WESTLAND COMMANDO MK2

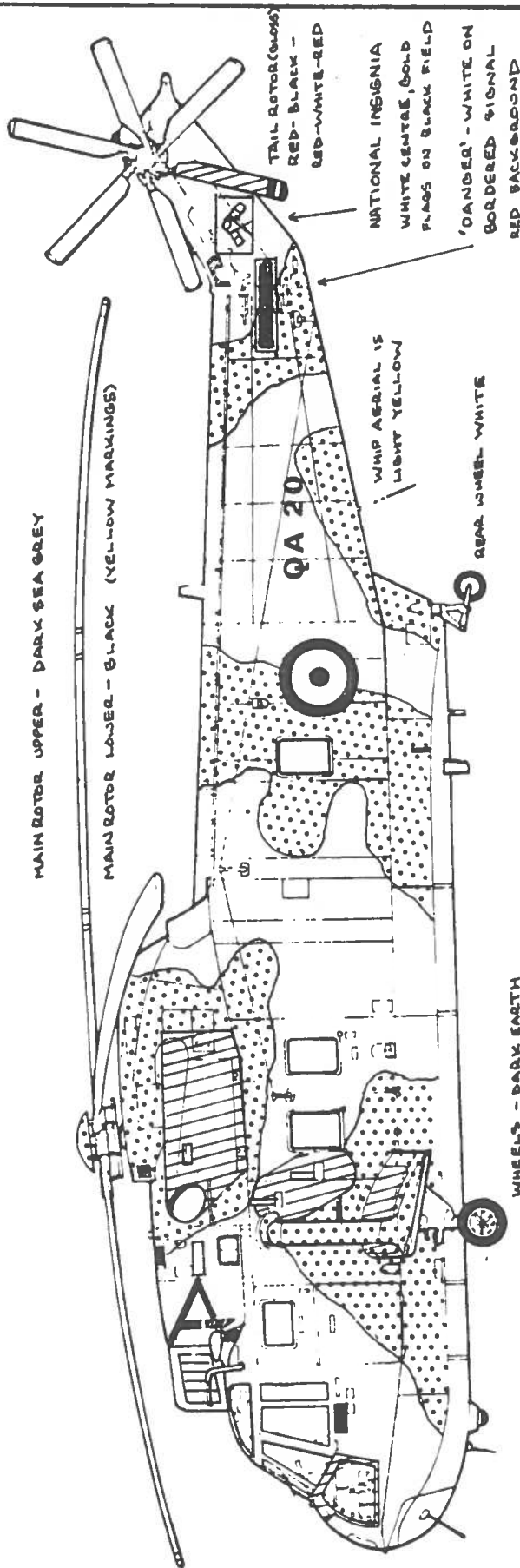
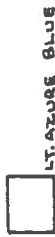
GOVERNMENT OF THE STATE OF QATAR.

## BASIC COLOURS - SAND AND DARK EARTH

UNDERSIDE LIGHT AZURE BLUE (ALL GLOSS)

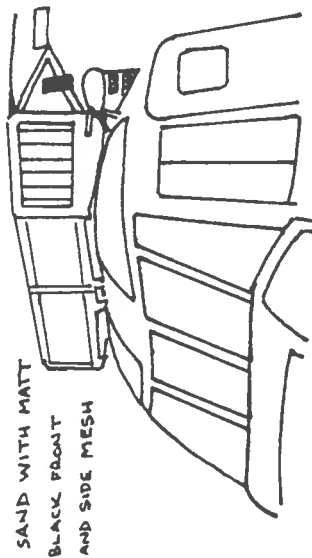
ROUNDEL - RED, GOLD, WHITE

INTERIOR - SEMI-GLOSS GREY



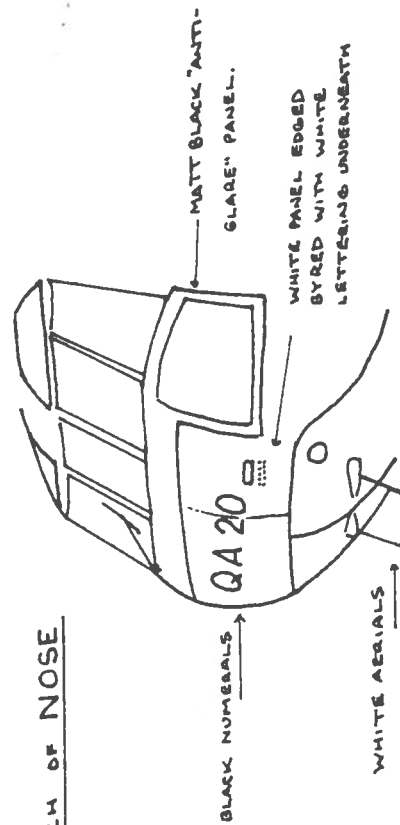
## SKETCH OF SAND FILTER

INSTALLATION.



SAND WITH MATT BLACK FRONT AND SIDE MESH

## SKETCH OF NOSE



Q276

(vii) MAIL IT !!!!!!!!!!!!!!!!!!!!!

1976	Austrian Fiat CR.32	J.J. Partridge
1977	Polish Offag D-III	"
	Iraq MiG-19	J. Barnfield
	Indonesian MiG-17	"
1978	Norwegian Scimitar*	J.J. Partridge
	Australian SE-5A	"
	Czech Breguet XIV	"
	Philippine P-26A	L. Chalk
	Czech MiG-15	J. Barnfield
	Dutch F-84F	M.M. Gardiner
	*Best in Show	

Small Air Forces Observer July 1978

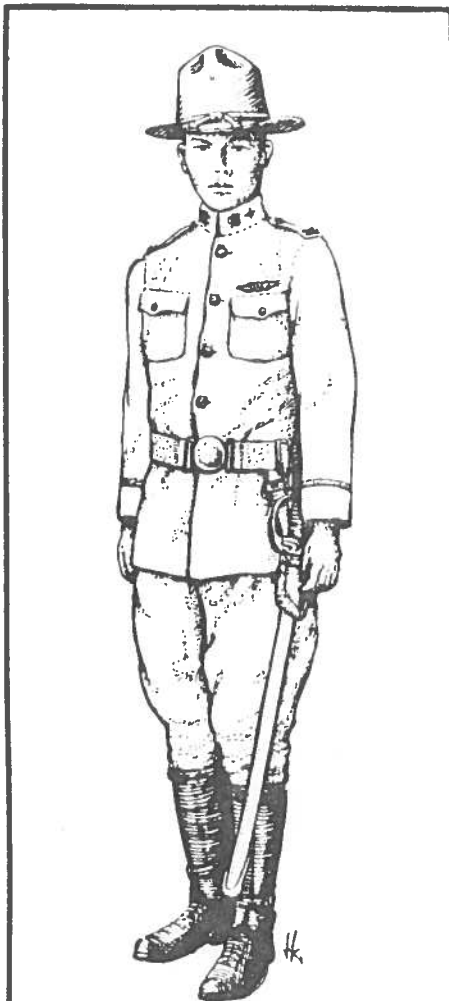


# philippine air force

## UNIFORMS/INSIGNIA



### PART 1 - The Phil. Air Service, 1920-1923



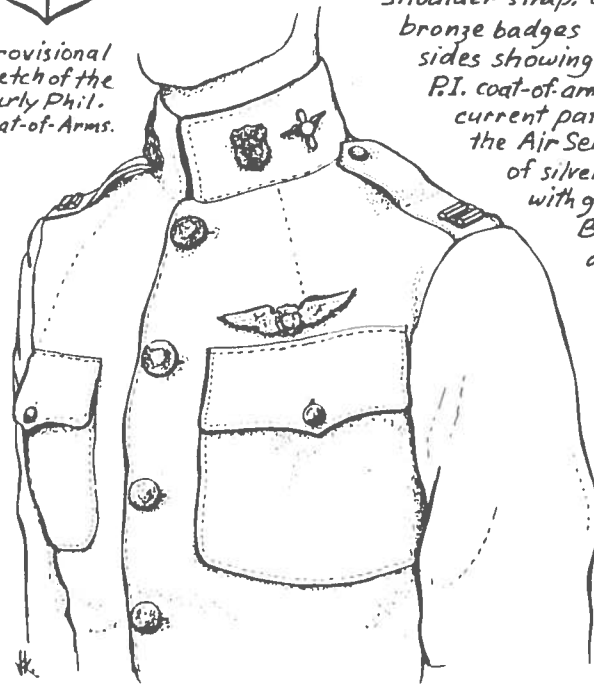
**Captain, P.A.S., 1920**

Light tropical khaki (tan) uniform with brown braid around cuffs to indicate officers - as does gold (with black) cord on the campaign hat. Brown leather leggings, worn over brown ankle-boots. The belt appears to be canvas of the same shade as the tunic - or perhaps pale leather. The large metal buckle is possibly gold-colored.



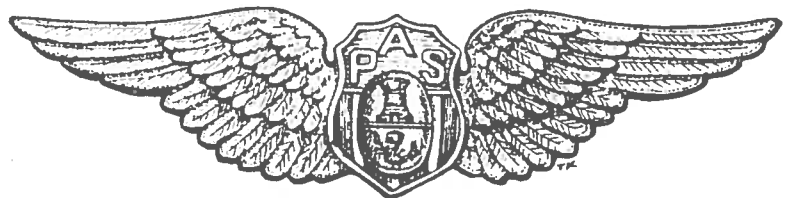
Provisional sketch of the early Phil. coat-of-arms.

Later segments will show squadron emblems and other uniform insignia, not necessarily in a chronological sequence.



Captain's rank, two silver bars, on each shoulder strap. Collar has bronze badges on both sides showing the former P.I. coat-of-arms (NOT the current pattern), plus the Air Service emblem of silver propeller with gold(?) wings. Buttons also dark bronze, probably with coat-of-arms.

[Pictorial references from Alberto A. Anido, SAFCH.]



**PILOT'S BADGE**, metal (possibly bronze). Central design incorporates a tower and a mythical sea-lion holding a sword.

[Ref.: 50 YEARS-PHILIPPINE AIR FORCE, by Aquino, Vasallo, and Anido.]

TED KOPPEL **safe**

"I have recently received some photos of Mexican Air Force P-47's that were taken at the time of the arrival of these aircraft in Mexico. I can now state conclusively that these aircraft had a bare metal finish. Markings were: Mexican national insignia in 6 positions, green-white-red rudder stripes, OD antiglare panel along upper fuselage, "PZT" on the vertical fin with the a/c number (1001 to 1016) beneath, and black propeller blades with yellow tips.

"Subsequently, these a/c were decorated in a variety of schemes. Some received cowl petals. Some had numbers painted on the cowl, e.g., PZT 1007 had a "7". On other a/c, the last two digits of the a/c number appeared in a large size on both sides of the fuselage. Fuselage and wing bands were applied in one of several colors: yellow, dull red, medium blue, bright green, and according to one source, white. During this period, the squadron emblem was a fighting cock, not Pancho Pistolas.

"When these a/c were painted overall grey (about 1953 or 1954), Pancho Pistolas reappeared. Cowl petals and wing & fuselage bands were also applied as described in SAFO #8.

"Thus, it appears that PZT 1003 which was described in SAFO #8 was in bare metal without wing & fuselage bands. The color of the cowl petals remains a mystery. If anyone has information about this a/c, please let me know. This would be a real gem." *Mardonio Islas Perez,*  
10 de Mayo 6-9, Col. Nativitas 13 D.F., Mexico.

"I have some additional comments on the camouflage of Finnish AF Junkers W.34 and Saab 35's (See letter on page 112 of Vol. 2.) (1) The book by Esa Anttala "Viimeinen partio Kannaksella" (The Last Patrol over the Karelian Isthmus) contains a photo of a Junkers W.34 (JU-127) on floats with the standard black/green camouflage scheme. No location or time for the photo is mentioned. (2) Finnish Draken DK-201 is now camouflaged, but it is not known if DK-203 and DK-205 have lost their unpainted finish. Of the new two-seaters, DK-266 is unpainted; the finish of the others remains unknown.

"To the list of Peruvian AF serials (page 84, Vol. 2) you may add An-26 363-364 and 366-367. AVIATION NEWS #13 Vol. 6 has a photo of 366 and lists the other 3 serials.

"Finally, please mention that I am looking for 1/48 scale kits by LINDBERG and AURORA (not MONOGRAM). I will either pay cash or exchange for these kits." *Martti Kuivalainen*, SAFCH #282, Etelaranta 4A, 96300 Rovaniemi 30, Finland.

"In SAFO #8, on page 98, you requested information on P-51B type aircraft being used by other than the RAF and China. The ARCO-AIRCAM Aviation Series - No. 3, North American Mustang in the various services other than USAAF does show a P-51B (or possibly a C7) in Swedish markings. The photograph indicates the aircraft as belonging to (J26) Staff aircraft, F 16 Wing, ex-USAAF P-51 B Serial #43-6365 'Z Hub' which force landed in Sweden during the war (date not indicated for either the landing nor when the photo was taken). There is an excellent side view color plate on page F (color plate section) showing this aircraft. The finish is overall bare metal with an olive drab anti-glare panel extending from the area behind the prop hub back to the front of the sliding canopy frame. The prop hub is white. The standard Swedish roundels appear in the six positions (wings and fuselage). Behind the fuselage roundel is a yellow number 16, approximately half the roundel diameter in height. Directly aft of the 16 in small black letters is the Swedish serial number of 26001. The tail fin displays a large D bordered in black. Although this P-51B is the only one profiled, the text indicates that a number of Cs and Ds did force land in that country which was why the Swedish government was keen on purchasing the Mustang in quantity after the war, and as such they were designated J-26 in Swedish service. So although not used in quantity, for sure, we do find the earlier models of the P-51 in odd places!"

Ken Frice (SAFCH #241)

"Correction to a mutilated text in SAFO #8, page 109: A good and reliable address mainly for the civil aviation enthusiast (but they stock a full range of military aviation literature, too.) with slides and prints: Airline Publications & Sales Ltd., Noble Corner, Great West Road, Hounslow, Middx. TW5 OPA, England (also known under the label VHF Supplies). Customers who subscribe to their AIRLINES series (excellent booklets with text, photos, and colour profiles) get 10% discount on other articles. They also have a series World Airlines Fleets monthly, good value indeed. For US customers they have in the USA a branch office since early 1978: Airline Publications, c/o Biblio Distribution Center, 81 Adams Dr., Totowa, New Jersey 07512." *Fritz Braun (SAFCH #220)*

"On page 112 of SAFO #8 I noticed some misprints in my letter. Saab 35BS Draken codes are DK-202, 204, 206, 208, 210, and 212. Now some new information: IPMS-Sweden SCALA summer 1977 issue gives a paint mix for Draken camouflage using Humbrol paints - 3 parts black (33) and 2 parts khaki (26) for the olive green, non-specular sea blue (HU4) and some drops black (33) for the dark blue-grey, and Hellfrau (HG3) for the light grey. As I have not tried either the Finnish or the Swedish formulae, I don't know how much they differ from each other. This same issue of SCALA has some very nice drawings of Saab Draken A, B and C versions of the Royal Swedish AF, with two photos of C and A (one each). Drawings are 3 pages. Scala is like MALLARI, 8 pages, A4 size. Finnish AF Draken XS DK-201 203, and 205 are now painted as BS. Of the three Draken C's (two seaters) at least one is camouflaged. A coming MALLARI will have a large article on Draken XS, F, and C in Finland.

"Further mistakes in my letter: The first Junkers.W.34 was coded JU-122; the K.43 were coded JU-123 through 128. The Junkers K.43 that was shot down 24.12.1939 was JU-126. Some new information: During the "Middle Peace" (13.3.1940 to 25.6.1941 when Finland was not at war with Russia), JU-122 and JU-128 were transferred to the "Border Police" and were given civil codes OH-MVG (JU-122) and OH-MVF (JU-128). After the War in July 1945, JU-124 and JU-127 also went to the Border Police with codes OH-MVH (JU-124) and OH-MVI (JU-127). (Reference: Suomen Siivet 4/1970). So, it seems a little mystery how 9 planes were still used in 1945. In 1930 one W.34 and six K.43 were bought. In 1935 two K.43's were lost, leaving five. In the Winter War one K.43 was destroyed, leaving four. The two a/c transferred to the Border Police in 1940 brings the total down to two. Then in 1944 five more W.34's were purchased; that makes seven. Even if JU-120, an F.13, is counted, this makes only eight?"

Martti Kuivalainen (SAFCH #282)

"The Israeli F-15 drawing (SAFO #9) contains an error - her tail number is '622', not '822'. I just got a look at some better photos of the same bird. Sorry 'bout that." *Tom Whisker* (SAFCH #300)

"I personally think that the FAF is better equipped now than at any time since 1945. The FAF now has about 60 fighters, all of which are going to be all-weather planes when the Mig-21F's are replaced by newer Migs. In the past the FAF first had Bf-109's (1945-54). Then, 15 Vampires (1953-65), 13 Gnats (1958-73), and 25-30 Mig-21F's (1963- ). If one adds 15 Vampires, 13 Gnats, and 30 Migs it comes to 58 a/c and of these 9 Vampires and 6 Migs are trainers. Add to this the fact that none of these 58 a/c can operate in bad weather, which is frequent during Finland's long winters, and you see why the FAF fighter force is more potent now than at any time during the recent past.

"Maybe you are wondering why the FAF does not have more than 60 fighters. It is because of the Paris Treaty of 1947 which limited the number of fighters the Finns could have to 60 a/c. This treaty also prohibited the FAF from having any bombers. The four Il-28's are used mainly for target towing, photo duties, etc.

Martti Kuivalainen SAFCH #282

"I can give some additions to the 'JSDF/AF SERIALS' article in Vol. 3 #1. The following serials are from the booklet FAMOUS AIRPLANES OF THE WORLD No. 39, NORTH AMERICAN F-86A,E,F SABRE published by Bunrin-Do in Tokyo 1973.

Type	USAF s/n	JASDF s/n	Number in Block
F-86F-40-NA	55-5048/5117	62-7701/7705	70
		72-7706/7770	
F-86F-40-NA	56-2773/2882	72-7771/7773	110
		82-7774/7868	
		92-7869/7880	
F-86F-40-NA	57-6338/6457	92-7881/7940	120
		02-7941/7991	
		12-7992/7000*	
F-86F-25-NA	not given	52-7401/7408	8
F-86F-30-NA	"	52-7409	20
		62-7410/7428	
F-86F-40-NA	"	62-7429/7535	107
RF-86F	"	52-6401,6404,6409	18
		62-6410,6411,6413	
		6414,6416,6418	
		6420/6426,6428	
		6430	

\*This s/n sequence doesn't make sense but is apparently correct, as there are several photos of s/n 12-7000 in the booklet. Probably the block should be given as 12-7992/7999 plus 12-7000." Robert A. Gordon (SAFCH #151)

"BMW Models have started their own Vac-form kits under the trade name Forma-Plane. 1977's releases were: Nooduyn Norseman (Bl.60), Curtiss Sea Hawk (Bl.60), MiG-3 (Bl.60), IAR-80 (Bl.60), IK-3 (Bl.60), Fiesler Fi-167 (Bl.84), Hawker Siddeley Nimrod (Bl.82), and Fairey Seafox (Bl.84). 1978 releases are planned to be: Cessna Bobcat, SAAB B-17, Fairey Albacore, Handley Page Hastings, PZL P-23 Karas, and a double sheet (their description) on the Argus/Forwarder. All releases are 1/72 scale.

"Now for the interesting part. I quote from their ad in Airfix Magazine, 'Surely the best way to please the majority of vac/form modelers is to ask them what they want and to get them involved in the selection of the forthcoming releases. Any information you may have to go along with your ideas would be of course very much appreciated. I'm sorry, for obvious reasons, I won't be able to reply to your letters, so if I say thanks now I hope it's enough.' Unquote. The coupon in the ad lists gives an order-of-preference 6 choice line-up, but letters are also suitable. The address is Des Brett, Formaplane, B.M.W. Models, 327/329 Haydons Road, Wimbledon, London SW19. Charles Detheridge (SAFCH #283)

"HELP! Three years of research for my book on the Arab Air Forces was destroyed in an unfortunate accident. I am trying to piece together all possible information on the inception, action and current status of the following: Sudan, Syria, Algeria, Jordan, Saudi Arabia, Abu Dhabi, Iraq, Egypt, Morocco, Libya, Lebanon, Kuwait, and Tunisia." Dick Goldman (SAFCH #89), Hoopoe Publishing Co., Inc., 314 Central Ave., Orange, NJ 07050.

"I have color slides of a/c of the Armada Argentina, F.A.Columbiana, F.A. Honduras, F.A. Salvadorena, F.A. de Chile, F.A. de Nicaragua, F.A. Panamena, and F-5Es of Ethiopian AF to trade for similar material from the smaller air forces." Ben Knowles (SAFCH #338)

9501 E. 33rd St., Tucson, AZ 85710

AIR FORCE INDICES for COMBAT AIRCRAFT OF WORLD WAR TWO by Weal, Weal, & Baker and for COMBAT AIRCRAFT OF THE WORLD by Taylor: While the structure of these books allows the reader to easily find all countries that used a particular a/c, there is no easy way to determine which a/c were used by a particular country. These indices, specially compiled for the SAFCH, present a country-by-country listing of all a/c mentioned in the books. Each index is 5 pages and each costs 50¢ plus postage (20¢ surface and 62¢ air mail). Jim Sanders, 27965 Berwick Dr., Carmel, CA 93923.

"A 9 hour stint in the AAVS files at Arlington turned up the following photos of Chinese Nationalist Air Force aircraft: 86445AC PB4Y-2; 86446AC PB4Y-2 (air-to-air); 88964AC C-46 landing; 86226AC F-47D line-up (about 1950); 91392AC F-84G (air-to-air, echelon formation); 85516AC T-6G taking off; 85519AC T-6G (another a/c & angle); 86448AC PT-17 (air-to-air); 91620AC F-84G (taxiing for take off).

"8 x 10 photos from AAVS cost \$1.25 each (their 4 x 5 photos are terrible). NO personal checks, only cashier's checks or money orders; make out to "ADSN 5037, A&FO, Bolling AFB". Address is 1361 Photo Sqdn, AAVS (MAC), 1221 South Fern Street, Alexandria, VA 22202. Expect to wait from 2 to 6 weeks, depending on their work load; as official work has priority." Dave Menard SAFCH #16

"I'm stationed at RAF Mildenhall which is a mecca for a/c passing through. I usually have my camera with me so I'll be ready to shoot if anything good comes in. I have some info for your F-104 project. Last week we had about six CF-104's drop in, between them 2 different color patterns. Four of the CF-104's had the all green color with standard CAF markings, two had a new camouflage pattern using the RAF's gret-green pattern, all the white portions of the national insignia and flag have been removed. I talked to one of the pilots and he said it is a test pattern but will probably be adopted for use as part of NATO schemes to tone down all a/c.

"We also had two A-10's stop over while enroute to RAF Bentwaters. One had the multiple grey scheme while the other had the usual grey but with brown, green splashes all over the entire a/c.

"One other thing that might be of interest is a toned down C-141. It has been in and out of here in the past few weeks. The entire a/c is grey to grey-green, no MAC tail or unit insignia. The national insignia is of the small size all black. On the tail in small size is USAF and below that the tail number.

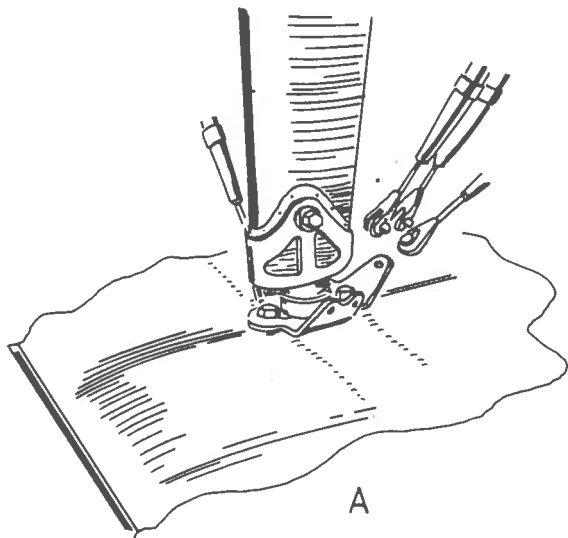
"Also some other news. The Norwegian Aerobatic team, the Jokers, is being disbanded, most likely financial reasons. The Belgium Red Devils has also stopped flying but this is due to conversion to the Alpha Jet. It has also been reported that the MiG-21's being used in Ethiopia have had a brown-green camouflage pattern, the F-5 appear to still be natural finish.

"I've just come across some information that might be of some interest. Some form of an Air Force or Air Arm is being formed in the following newly independent or soon to be independent countries: Botswana, Camori Islands (don't ask me where they are), Malawi, Malta, Namibia, Sierra Leone, Swaziland, Transkei, Belize, Liberia. The Air Forces of Angola and Mozambique are well on the way being equipt with Soviet a/c. It is also rumored that Cyprus is in the market for some type of a/c. I don't have any information as to insignia for the above countries, with the exception of Angola which is red, orange, and black, style unknown but possibly in roundel form.

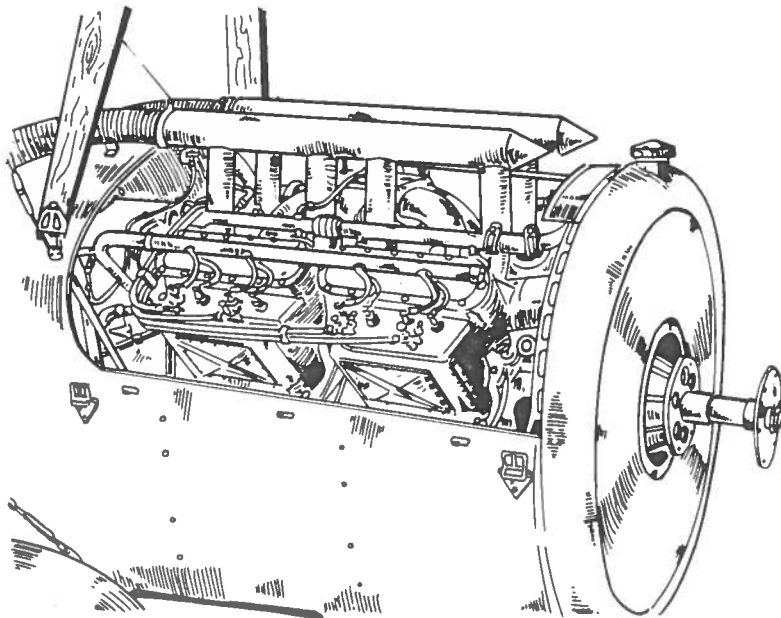
"We had a couple of Israeli 707's pass through. It looks like they have taken the Star of David insignia off, the only thing left is the registration number."

they become available. However, if you are interested in any particular sheets, you can save a lot of time by pre-ordering. For each sheet desired, send the SAFCH a self-addressed, stamped postcard. When the decals arrive, I'll mark the cost on the card and mail it back to you. Non-US members can save both time and bank charges by sending a prepayment to establish a SAFCH account from which I can withdrawl money as the decals become available.

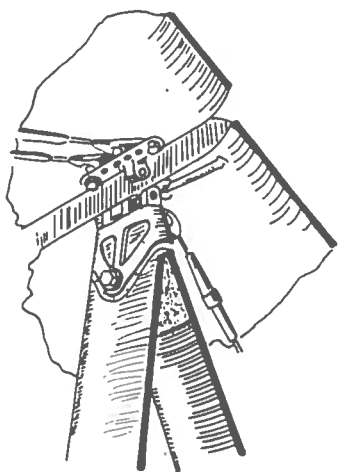
I would like to ask all model-building SAFCHers to give Mardonio all the encouragement possible. Even if you had not planned to do so, please consider adding a couple of Mexican a/c to your collection. You'll like it.



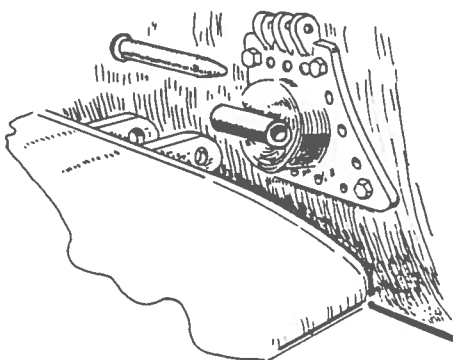
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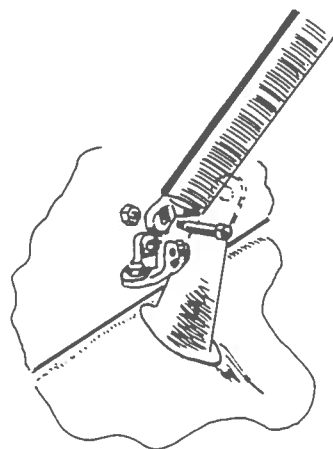
B



C



D



E

- A. INTERPLANE STRUT ATTACHMENT.
- B. THOMAS V-8 INSTALLATION.
- C. CABANE TO WING CONNECTION.
- D. WING TO FUSELAGE ATTACHMENT.
- E. TAILPLANE STRUT DETAIL.

SPECIAL BOOK BARGAIN FOR SAFCH MEMBERS: Thanks to Denis Maloney (SAFCH #307), SAFCH members can obtain two useful books at substantial savings. (1) AIRCRAFT, ENGINES, AND AIRMEN. A SELECTIVE REVIEW OF THE PERIODICAL LITERATURE 1930-1969 by August Hannibal for \$11.25 (list price \$22.50). And, (2) INDEX OF MODEL PERIODICALS 1971-1975 by Paul Cardwell for \$22.95 (list price \$27.00). Prices include postage. Send check, made out to Scarecrow Press, and a preaddressed mailing label to Denis Maloney, 14 Lafayette Dr., Hazlet, NJ 07730.

L.W.F. Model V